

2

THIS FILE ONLY

**AD-A221 830**

## **Families in the Army**

### **Looking Ahead**

Peter A. Morrison, Georges Vernez,  
David W. Grissmer, Kevin F. McCarthy

DTIC  
Approved for release;  
Distribution Unlimited

**RAND**

ARROYO CENTER

90 05 25 016

The research described in this report was sponsored by the United States Army, Contract No. MDA903-86-C-0059.

**Library of Congress Cataloging in Publication Data**

Families in the Army.

"Prepared for the United States Army."

"R-3691-A"

"June 1989."

Bibliography: p.

1. Military dependents—United States. I. Morrison, Peter A. II. United States. Army. III. RAND Corporation.

UB403.F35 1989 355.1'2

89-3600

ISBN 0-8330-0935-4

The RAND Publication Series: The Report is the principal publication documenting and transmitting RAND's major research findings and final research results. The RAND Note reports other outputs of sponsored research for general distribution. Publications of The RAND Corporation do not necessarily reflect the opinions or policies of the sponsors of RAND research.

Published by The RAND Corporation  
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER R-3691-A	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Families in the Army Looking Ahead		5. TYPE OF REPORT & PERIOD COVERED interim
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Peter A. Morrison, Georges Vernez, David W. Grissmer, Kevin F. McCarthy		8. CONTRACT OR GRANT NUMBER(s) MDA903-86-C-0059
9. PERFORMING ORGANIZATION NAME AND ADDRESS The RAND Corporation 1700 Main Street Santa Monica, CA 90406		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Office of the Chief of Staff, Hq US Army (DACS-DMC) Washington, D. C. 20301		12. REPORT DATE June 1989
		13. NUMBER OF PAGES 68
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for Public Release; Distribution Unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) No Restrictions		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Military Personnel Family Members Army Personnel Forecasting		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) see reverse side		

This study considers how aggregate demand for Army family services will change in the future and identifies long-range issues posed by the changes in Army families. The Army will be drawn further into the realm of family concerns that Army personnel themselves face because (1) the "early" pattern of Army family formation and growth will continue to compress family-related needs into the early years of Army service; (2) the changing division of labor within families will generate competing obligations to the Army and to one's family members; and (3) the growing orientation toward paid employment among younger generations of Army spouses foreshadows a growing demand for day care, Army assistance in lining up jobs, and diminished flexibility in traditional volunteer activities. The number of Army family dependents will likely decline, not increase, between 1985 and 2000, although Army actions and policies could potentially modify that future. Four long-range issues deserve closer study and continued monitoring: (1) employment opportunities for Army spouses, (2) the growing proportion of women among single parents, (3) readiness, and (4) potential "hidden" effects of Army practices and policies.

# Families in the Army

Peter A. Morrison, Georges Vernez,  
David W. Grissmer, Kevin F. McCarthy

Prepared for the  
United States Army

Accession For

NIS GRA&I	<input checked="" type="checkbox"/>
NIS IIB	<input type="checkbox"/>
Unrecorded	<input type="checkbox"/>
Not Notation	

A-1

Approved for public release; distribution unlimited

## PREFACE

This study is part of the Arroyo Center's project entitled "Enhancing the Effectiveness of Army Family Programs." The major purposes of this project are to assist the Army in defining its future needs for family support programs and to analyze the relationships among the characteristics of Army families, Army family programs, and readiness.

This report examines how Army families have changed in recent years, anticipates directions of future change and important issues those changes pose, and explores their implications for force management and service delivery policies. It is meant to provide RAND and Army staff a context for formulating Army family policy.

The project has thus far released one other publication: Georges Vernez and Gail Zellman, *Families and Mission: A Review of the Effects of Family Factors on Army Attrition, Retention, and Readiness*, N-2624-A, August 1987.

The Army Deputy Chief of Staff for Personnel, Lieutenant General Allen K. Ono, is the project sponsor, and Ms. Gail McGinn of the U.S. Army Community and Family Support Center is the project's Action Officer. This research was conducted at the RAND Arroyo Center within its Manpower, Training, and Performance Program.

### The Arroyo Center

The Arroyo Center is the U.S. Army's Federally Funded Research and Development Center for studies and analysis operated by The RAND Corporation. The Arroyo Center provides the Army with objective, independent analytic research on major policy and management concerns, emphasizing mid- to long-term problems. Its research is carried out in five programs: Policy and Strategy; Force Employment and Development; Readiness and Sustainability; Manpower, Training, and Performance; and Applied Technology.

Army Regulation 5-21 contains basic policy for the conduct of the Arroyo Center. The Army provides continuing guidance and oversight through the Arroyo Center Policy Committee, which is co-chaired by the Vice Chief of Staff and by the Assistant Secretary for Research, Development, and Acquisition. Arroyo Center work is performed under contract MDA903-86-C-0059.

The Arroyo Center is housed in RAND's Army Research Division. The RAND Corporation is a private, nonprofit institution that

conducts analytic research on a wide range of public policy matters affecting the nation's security and welfare.

Stephen M. Drezner is Vice President for the Army Research Division and Director of the Arroyo Center. Those interested in further information concerning the Arroyo Center should contact his office directly:

Stephen M. Drezner  
The RAND Corporation  
1700 Main Street  
P.O. Box 2138  
Santa Monica CA 90406-2138  
Telephone: (213) 393-0411

## SUMMARY

The typical Army family once consisted of a male active member with a nonworking spouse and one or two children. By the late 1980s, families in the Army (as in civilian life) have become more diverse and complex. Increasingly, female spouses are in paid employment, and more families have both spouses on active duty; single-parent Army families are headed more often by female members; and when personnel are stationed abroad, family members more often accompany them. Such changes are reshaping families' needs and altering the demands for Army quality-of-life and family-oriented services. More generally, these changes are affecting the Army as an institution.

To formulate appropriate family policies, the Army needs hard data on these changes and clarification about what families will look like in the future. Accordingly, this study was undertaken to: (1) document and quantify trends in Army families, (2) anticipate directions of potential future change, and (3) identify the important issues those changes pose and explore their implications for force management and service delivery policies.

## TRENDS IN ARMY FAMILIES

We examine trends in separate domains of Army family life, relating them to civilian family trends where possible. These domains, and the principal points documented, are:

- *Family Formation:* Army families, relative to civilian ones, get established early. Although this "early" formation pattern has shifted slightly toward the civilian pattern, the gap between early-forming Army families and later-forming civilian ones remains.
- *Childbearing:* Army couples bear children somewhat earlier than do civilian couples; also, they have more children than their same-age civilian counterparts.
- *Employment of Spouses:* Army spouses have joined the work force in growing numbers but increasingly encounter unemployment.
- *Stationing Abroad:* Family members are more often accompanying Army personnel at foreign stations.



## **DIRECTIONS OF FUTURE CHANGE**

To explore possible directions of change, we posited several assumptions about how Army families in the year 2000 might differ from those of the mid-1980s. Our analysis (focused on enlisted personnel) suggests that the number of Army family dependents will decline slightly by the year 2000 and that potential changes in force structure, as envisioned here, would not markedly alter that future. Certain extreme changes in family structure and behavior could accelerate the future decline in dependents, or even completely reverse it.

Those hypothetical changes might arise in several ways. Certain Army actions, such as changes in tours of duty or family services, might restructure incentives and disincentives for marriage and child-bearing during Army service, widen or narrow future employment opportunities available to young spouses seeking jobs, or alter the reenlistment behavior of single parents. Further research is needed to identify how existing Army actions and policies may now be influencing family-formation behavior and related choices, and to anticipate the potential effects of future actions and policies.

## **ISSUES AND IMPLICATIONS**

### **Employment Opportunities for Spouses**

Army spouses, like civilian wives, have joined the work force in growing numbers, and married couples in which both spouses are wage earners have become more common. The especially strong orientation toward paid employment among younger generations of spouses foreshadows growing demand for daycare, need for assistance in finding jobs, and less participation in traditional volunteer activities. It also highlights the importance of institutional practices within the Army—for example, the frequency and location of moves—that may constrain or disrupt the employment of spouses.

Employment opportunities for Army spouses are critical to satisfactory economic adjustment in Army life. Future labor market difficulties that Army spouses encounter may have a deleterious economic effect on their families and, in turn, on the Army's continuing ability to retain experienced and highly skilled personnel.

### **Dual-Army and Single-Parent Families**

As female military members have become more numerous, the Army has gained proportionally more "dual-Army" families. Likewise, there has been a small increase in the number of single-parent families.

Dual-Army and single-parent families pose special problems for the Army. More than 42,000 accompanying Army children are currently in families where the only parent or both parents may be called away for a prolonged period in case of a conflict. With more dual-Army families, assigning both spouses to the same duty station will become more difficult. The roles of military member and of parent will often conflict as the two-worker Army families and single parents become more common. This conflict can be exacerbated or moderated insofar as institutional practices within the Army increase or reduce unpredictable changes in work schedules, the frequency and length of unscheduled alerts and planned deployments, the frequency and locations of moves, and the length and unpredictability of working hours.

### **Overlap of Family Formation with Army Service**

Because Army families are established early, much family formation and growth involves young adults *while* they are in the Army, often during their first term. The "early" pattern of Army family formation and growth could be a result of self-selection (a tendency for family-oriented individuals to join or stay with the Army). Alternatively, Army practices and policies may *induce* people to form and build families earlier within the Army setting.

### **Stationing Abroad**

It is now more common than ever for family members to accompany Army personnel when they are stationed abroad. Dependents living abroad pose several problems: (1) dealing with their safety in times of crisis; (2) enabling spouses to find employment, given that second incomes are becoming indispensable to most families' budgets; (3) allocating sufficient resources to maintain quality-of-life services at current levels (since service use is 30 to 65 percent higher abroad than at home); and (4) enabling families to care for children while abroad.

### **Retention and Readiness**

The Army is likely to be drawn further into the family concerns facing its personnel. Ameliorating those concerns could avert developments that might otherwise negatively affect retention and readiness. Our review of Army force management and family service policies has suggested a number of possible adjustments, of which the following are examples.

- **Rotation, deployment, and assignment policies.** Initiatives to reduce the frequency of rotation would reduce costs and disruption in spouses' work careers and could also increase training effectiveness and unit cohesion. Similarly, policy changes to reduce the length or frequency of family separations and to increase the predictability of working hours would address major sources of family dissatisfaction with Army life. Although such changes would not be simple to implement and could carry substantial resource implications, we recommend that the Army carry out a systematic review of possible innovations in these areas, assessing the costs and benefits.
- **Effectiveness of services.** Enhancements to certain preventive services appear to offer high potential payoffs for modest investments. For example, the sponsorship program, which currently serves about one out of three military members making permanent changes of station, could be given more emphasis, particularly for junior enlisted personnel. Serious consideration should also be given to expanding outreach programs, especially those directed to first-term personnel and soldiers stationed abroad, to assist family members in relocating and adjusting to new duty stations.
- **Resource allocation.** The growth of two-worker families and related demographic changes will intensify family needs for such services as child development, youth activities, and spouse employment search assistance. The Army should consider increasing the priority of these services. It should also review the allocations given to other services for which demand seems to be declining, including arts and crafts, music and theater, bowling, and clubs. The review should also consider the allocation of Morale, Welfare, and Recreation Programs and family support funds between U.S. and overseas locations, given that use of services overseas is 30 to 65 percent higher than in the United States.
- **Enhanced Officer and NCO training.** Company, squadron, and battalion commanders must shoulder much of the burden of communicating with soldiers on family matters. Enhanced training for such commanders and NCOs could improve their understanding of recent changes in family structure, provide specific guidelines for sponsorship and information programs, and encourage assistance to outreach and family support groups.

## ACKNOWLEDGMENTS

We thank the many military and civilian staff of the U.S. Army who have facilitated this study. Ms. Gail McGinn, the Project Officer, and Dr. Richard Fafara, at the U.S. Army Community and Family Support Center, offered continuous guidance and support throughout this project. We also thank Dr. Zahava Doering, from the Defense Manpower Data Center, who made the 1979 and 1985 survey data available to us and otherwise provided valuable advice. At RAND, we thank Michael Polich, Susan J. Bodilly, and Thomas Glennan for their comments on earlier drafts; and Lisa Meredith and George Monsivais for their assistance in programming and preparation of graphics.

## CONTENTS

PREFACE .....	iii
SUMMARY .....	v
ACKNOWLEDGMENTS .....	ix
FIGURES .....	xiii
TABLES .....	xv
Section	
I. INTRODUCTION .....	1
The Changing Army Family .....	2
Future Scenarios .....	2
Limitations .....	3
Organization .....	5
II. ARMY FAMILIES: HOW AND WHY THEY HAVE CHANGED .....	6
Portrait of Contemporary Army Families .....	6
Marriage and Parenthood .....	7
Spouses .....	9
Trends in Key Family Domains .....	11
III. PROJECTIONS OF ENLISTED ARMY FAMILIES .....	36
Evolution of Force Structure .....	36
Alternative Scenarios of Family Change .....	42
Results .....	47
Conclusions .....	48
IV. IMPLICATIONS .....	49
Employment Opportunities for Spouses .....	49
Dual-Army and Single-Parent Families .....	49
Overlap of Family Formation with Army Service .....	50
Stationing Abroad .....	51
Retention and Readiness .....	51
Appendix	
A. CHANGES IN THE COMPOSITION OF THE FORCE ..	55

B.	ACCOMPANIMENT RATES FOR DEPENDENT CHILDREN BY FAMILY SIZE AND STATION LOCATION, 1985 .....	62
C.	SUPPLEMENTAL DETAIL ON FORCE STRUCTURE PROJECTION MODEL .....	64
	REFERENCES .....	67

## FIGURES

1.	Trends in Army marital status and number of dependents per military member, 1955-1985 . . . . .	7
2.	Distribution of marriages by length, 1985 . . . . .	8
3.	Percent of personnel who are parents, 1985 . . . . .	8
4.	Distribution of families with children, by number, 1985 . . . . .	9
5.	Distribution of Army children by age, 1985 . . . . .	10
6.	Percent of all Army personnel accompanied by dependent children, 1985 . . . . .	10
7.	Distribution of female spouses by current age, 1985 . . . . .	12
8.	Percent of civilians and Army personnel ever married at selected ages, 1985 . . . . .	14
9.	Emergence of a delayed marriage pattern in early adulthood . . . . .	15
10.	Differences in the age at which Army and civilian families initiate childbearing . . . . .	17
11.	Percent of Army women with accompanying children . . . . .	20
12.	Rise in labor force participation of wives and mothers, 1950-1987 . . . . .	24
13.	Working lives of women: Changes across generations . . . . .	25
14.	Key changes in female spouses' current activities, 1979-1985 . . . . .	29
15.	Rise in labor force participation and unemployment among female spouses, 1979-1985 . . . . .	30
16.	Key differences between native- and foreign-born female spouses: 1985 . . . . .	31
17.	First and second term reenlistment rates, 1976-1986 . . . . .	38
18.	Army accessions, 1973-1986 . . . . .	39
19.	Summary of enlisted force evolution by YOS group . . . . .	43
A.1.	Trend in junior enlisted Army personnel . . . . .	56
A.2.	Trend in second- and third-term enlisted Army personnel . . . . .	56
A.3.	Trend in senior enlisted Army personnel . . . . .	57
A.4.	Trend in senior enlisted Army career force . . . . .	57
A.5.	Early retention patterns of males with different education and mental aptitude . . . . .	58
A.6.	Early retention patterns of high school graduates of different gender and mental aptitude . . . . .	59
A.7.	First-term retention patterns for personnel of different race and gender . . . . .	59
A.8.	The trend in the population of enlisted women . . . . .	60
A.9.	The trend in the population of enlisted blacks . . . . .	60

## TABLES

1.	Distribution of Army personnel by term at specific ages, 1985 . . . . .	4
2.	Comparative size of Army and civilian families, by age, 1985 . . . . .	19
3.	Number of Army women age 22 and older, and accompanying children, 1979-1985 . . . . .	20
4.	Changing makeup of single-parent Army families, 1979 and 1985 . . . . .	21
5.	Comparison of selected current marital statuses, by gender . . . . .	22
6.	Female Army spouses' current activity, by age, 1985 . . . . .	27
7.	Unemployment rate among female Army spouses, 1985 . . . . .	28
8.	Female spouses' current activity, by nativity, 1985 . . . . .	32
9.	Indicators of family accompaniment in 1985, CONUS vs. abroad . . . . .	33
10.	Aggregate changes in the number and location of Army children, 1979-1985 . . . . .	34
11.	Distribution of Army personnel, by age in 1985, CONUS vs. abroad . . . . .	35
12.	Assumptions for projecting length-of-service structure . . . . .	40
13.	Alternative projections of Army enlisted force structure under high, medium, and low pay scenarios . . . . .	42
14.	Past and assumed future ratios of dependents and children per 100 enlisted personnel . . . . .	44
15.	Assumptions for alternative family structure projections . . . . .	45
16.	Differences in potential numbers of family members and children in year 2000, comparison of scenarios for enlisted personnel . . . . .	46
B.1.	Changes in comparative size of Army families, by age: 1979-1985 . . . . .	62
B.2.	Accompaniment rates for dependent children by family size and station location, 1985 . . . . .	63
C.1.	Pay and unemployment elasticities for high-quality groups at different years of service . . . . .	65



## I. INTRODUCTION

The initial impetus for this study came from the Army's recognition that a larger percentage of its force is married now than in the past, its perception that the composition of Army families has changed, and its concern that both developments may negatively affect retention and force readiness. The expectation that the force will continue to "age" (concentrate within higher years of service) raised further concern about Army family composition. Until now, no systematic analysis has been done of the nature and magnitude of these changes.

Changes in Army families already are affecting the demand for Army quality-of-life and family-oriented services and, more generally, the Army itself as an institution. Increasingly, the Army has to compete for the time and commitment of soldiers who have broadening family obligations. Adjustments to these changing circumstances will become inevitable. As the Army places priority on formulating a coherent policy on its families, it needs quantitative information on how Army families and their members are changing, what families will look like in the future, and what needs they will have. Accordingly, this study has three purposes:

1. To document and quantify trends in the number, composition, and location of Army family members.
2. To anticipate directions of future change in these factors, given trends for both Army families and civilian families.
3. To identify the important issues these changes pose and explore their implications for force management and service delivery policies.

This report examines how Army families have changed in recent years, and how they differ from civilian families. We also consider how family changes may affect future service needs and how they may shape the Army itself as an institution. We examine and interpret recent changes in Army families in light of changes under way in civilian families and build on these insights to project future directions of change in Army family structure. The analysis draws primarily on data from the 1979 and 1985 DoD Survey of Officers and Enlisted Personnel. Using several alternative scenarios to analyze what may lie ahead in the year 2000, we consider the implications these changes hold for the types of services families will need.

## THE CHANGING ARMY FAMILY

The typical Army member's family once consisted of a male active member with a nonworking spouse and one or two children. By the mid-1980s, families in the Army, as in civilian life, had become more diverse and internally more complex. The developments producing diversification, include:

- *More Army spouses in paid employment:* Between 1979 and 1985, their labor force participation rose from 47.5 percent of spouses to 56 percent.
- *More "dual-Army" families:* In 1985, approximately one in ten Army personnel were members of families in which both spouses were on active duty. Fewer than 1 in 14 were in 1979.
- *More female soldiers:* Women have increased from 7 to 10 percent of the active duty force; and with over half of the Army's positions currently open to women, that fraction will rise.
- *More women as single parents.* In 1979, only one of every four custodial single-parent Army families was headed by a female member; by 1985, the figure was nearly one in two.
- *More family members accompanying personnel stationed abroad.* Between 1979 and 1985, the percentage of all Army children living abroad rose from 27 to 32.

No one trend alone looms large, but in combination their effects cumulate and have important implications. By 1985, for example, approximately 1 of every 11 accompanying Army children in 1985 was in a family where one or both parents could be called away for a prolonged period in the event of a conflict. This fraction represents more than 42,000 children who were accompanying either two parents both on active duty or an unmarried custodial parent on active duty.

Along with this diversification have come more complex internal relationships within Army families. The family role of Army members—once limited to wage earning—has expanded to involve them more actively with childcare and other domestic responsibilities. The Army will have to compete for the time and commitment of soldiers who face broadening family obligations, drawing the Army further into the realm of family concerns that personnel themselves face.

## FUTURE SCENARIOS

To explore possible futures that might materialize, we shall formulate alternative sets of assumptions about changes in Army families

through the end of this century. Those assumptions reflect our judgment as to what is likely, and also what is plausible, with respect to three determinants of change:

1. Evolution of the force's structure through changes in recruitment and retention policies and economic conditions, which will alter the proportion of Army personnel at particular years of service,
2. The timing of family formation and growth during early years of service, which can heighten or reduce the frequency of marriage and childbirth during early terms of service, and
3. Numbers of dependents and children per hundred Army personnel at particular lengths of service.

## LIMITATIONS

Several caveats must precede the analyses ahead. First, young people generally marry and commence childbearing—and also commence a particular term of service—within well-defined age ranges. Some of the comparisons ahead will be made with reference to chronological age, others with reference to years of service (YOS), depending on available data. Age and YOS are highly correlated with each other (as seen in Table 1): Both are associated with the occurrence of certain family events (e.g., marriage, parenthood) and milestones during Army service (e.g., completion of initial training, reenlistment).

Second, the population of Army personnel (hence Army families) is not a static entity, and a *compositional* shift does not necessarily signal *behavioral* change. People and families join and leave, thereby altering Army population characteristics even as we measure them. For example, many single people join the Army and then marry during their first term. If only those with children were to reenlist (thereby altering population composition), then Army families on average would appear to “grow” in size (an apparent behavioral effect) as military members advanced in age or length of service—even without anyone else actually becoming a parent.

Third, throughout our analysis we draw extensively on data from the 1979 and 1985 Department of Defense Surveys of Officers and Enlisted Personnel, which we tabulate specifically for Army personnel. We caution that these surveys are *not* representative of all personnel in the Army in 1979 and 1985. The surveys, and hence our data in this report, refer either to individuals with five or more months of service as of March 1979 or ten or more months of service as of March 1985.

**Table 1**  
**DISTRIBUTION OF ARMY PERSONNEL BY TERM AT SPECIFIC AGES, 1985**  
 (Percent)

Age	Years of Service <sup>a</sup>				Number
	1-4	5-8	9-12	13+	
Men					
Under 24	89	10	—	—	208,200
24	48	52	—	—	33,600
25-26	34	53	13	—	61,700
27	25	39	36	—	26,200
28-31	14	27	48	11	86,700
32-36	5	9	25	60	83,100
37 & older	2	2	7	89	90,100
All ages	42	19	15	24	589,600
Women					
Under 24	85	14	—	—	24,400
24	52	48	—	—	5,700
25-26	47	48	5	—	8,900
27	34	51	15	—	3,800
28-31	25	41	31	4	10,100
32-36	22	23	31	24	6,700
37 & older	11	18	25	46	3,300
All ages	53	30	11	6	62,900

SOURCE: Tabulated from 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Individual cells may not total to 100 percent because of rounding.

Accordingly, the trends discussed ahead are for the Army as a whole, minus the newly enlisted.<sup>1</sup>

Generally, the data from these two surveys slightly overstate the proportion of the force actually married and with children because personnel most likely to be single (the newly enlisted) were not surveyed. This exclusion of the most recent entrants into the Army makes our

<sup>1</sup>For a detailed discussion of the survey sample designs, survey populations, and weighting process, see Doering et al. (1982) for the 1979 survey, and DMDC (1986a,b) for the 1985 survey. The 1979 survey is generalized to 94 percent of Army personnel; the 1985 survey is generalized to 85 percent of Army personnel.

survey figures slightly different from those derived from administrative records, which include all military members at a given time.<sup>2</sup>

A further limitation derives from the modest response rates on these surveys, 54 percent in 1979 and 60 percent in 1985. Low response rates introduce possible bias, because nonrespondents may differ systematically from respondents. Accordingly, we shall examine trends expressed in relative rather than absolute terms. This will diminish (although not eliminate) nonresponse biases if, as we assume, nonrespondents are similar in both years.

## ORGANIZATION

We first document the trends in the number, composition, and location of Army family members, comparing them with their counterparts for civilian families,<sup>3</sup> where data exist. (Explanations of civilian trends are more complete and can help interpret the Army counterparts to them.) Section II provides a brief descriptive overview of contemporary Army families and examines trends in five family domains: marriage, childbearing, family dissolution and remarriage, employment of spouses, and stationing abroad. In Sec. III, we build on these insights to project directions of future change in Army family structure to the year 2000, constructing several alternative scenarios to analyze and anticipate what may lie ahead. Finally, in Sec. IV we discuss the implications these changes hold for service demand and identify the broad policy issues they pose.

---

<sup>2</sup>Also, because the sampled population covered by the 1979 survey is broader (including those with five to nine months of service, which the 1985 survey excluded), the magnitude of relative downward trends may be slightly underestimated and that of upward trends may be slightly overestimated. This may affect those measures that typically are associated with age, such as marital status and number of children. By measuring changes in relative rather than absolute terms, we have sought to minimize such potential biases.

<sup>3</sup>For convenience, we refer to "civilian families," although our data typically are for all U.S. families, including those in the military.

## II. ARMY FAMILIES: HOW AND WHY THEY HAVE CHANGED

### PORTRAIT OF CONTEMPORARY ARMY FAMILIES

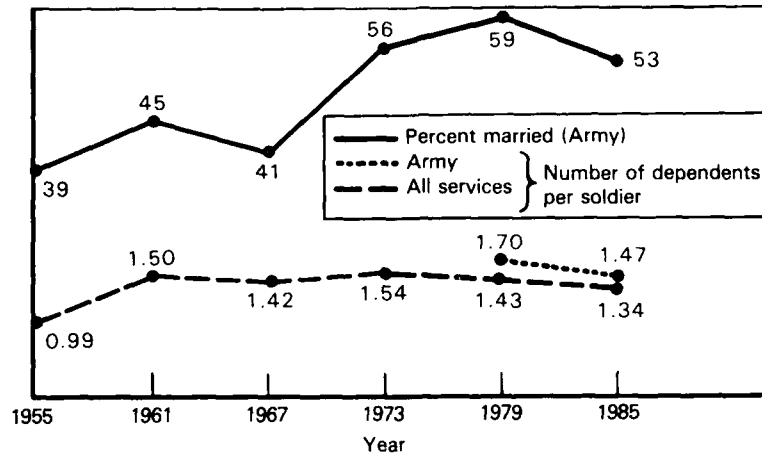
Currently, over half the Army active duty force is married, substantially more than in the pre-Vietnam era when less than 40 percent were. Nearly all of the increase in married members has taken place in the enlisted ranks. The proportion of married soldiers and the number of dependents has remained remarkably stable since the beginning of the All Volunteer Force (1973); and the more than 1.1 million spouses, children, and other dependents of active duty personnel exercise a continuing demand for Army quality-of-life and family-oriented programs.

In today's Army, the timing of key family events and stages of family life tends to coincide with the initial terms of service. Thus, a substantial portion of marriage and childbearing involves young adults *while* they are soldiers, many during their first term. Moreover, fewer than half of all recruits reenlist for a second term; therefore, any differences in the families of those who reenlist and those who do not are potentially important.

Since 1955, the proportion of married soldiers, and the number of dependents per soldier, have changed noticeably. As seen in Fig. 1, the Vietnam war marked a major turning point: Before that, only about two-fifths of the force was married. By its conclusion (and ever since), a majority of the force—between 52 and 59 percent—had been married. The primary source of this change has been the growth in the proportion of enlisted soldiers who are married (although in the most recent period considered, the percent of married soldiers has declined slightly).<sup>1</sup> The number of dependents per soldier (all services) rose by 50 percent between 1955 and 1961, hovered around 1.50 dependents per soldier until the end of the Vietnam war, and then declined to about 1.34 per military member in 1985. For the Army, the corresponding ratio—1.47 dependents per soldier—was slightly higher but trending in the same direction.

---

<sup>1</sup>The data on marital status in Fig. 1 are from administrative records. For 1979 and 1985, these data differ from the estimated 61.4 and 59.0 percent married based on the 1979 and 1985 DoD surveys, respectively, for reasons that were outlined in Sec. I. Both sources, however, agree in showing a decline in the percent married after 1979, although the decline measured by the DoD surveys is smaller.



Sources: Goldman (1976) for years 1955 to 1973; Department of Defense (1980) for 1979; and Department of Defense (1986) for 1985.

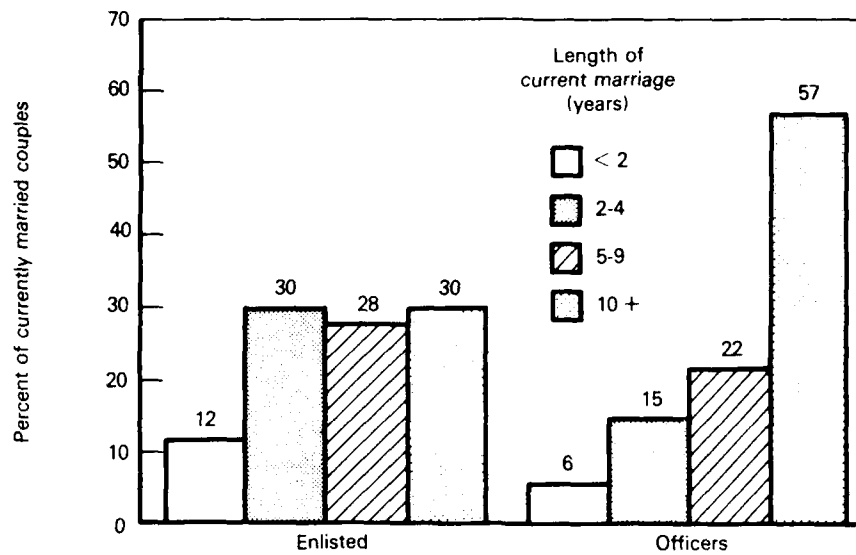
Fig. 1—Trends in Army marital status and number of dependents per military member, 1955–1985

The following sections add further statistical detail to the portrait of today's Army families, drawing on published data from the Defense Manpower Data Center, 1986a,b.

## MARRIAGE AND PARENTHOOD

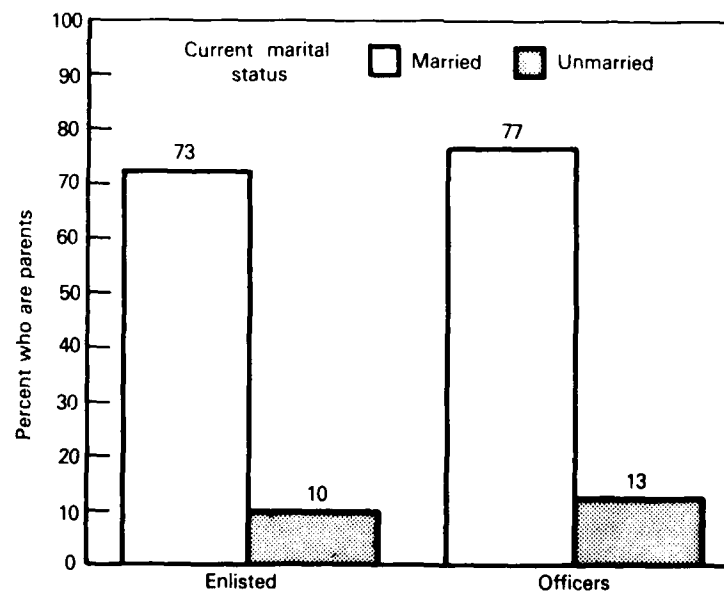
The majority of Army personnel in 1985 were married: 58 percent of enlisted personnel and 79 percent of officers. Most spouses of enlisted men have been married to their husbands for less than ten years; most officers' spouses, by contrast, have been married to their husbands for at least ten years (Fig. 2).

As seen in Fig. 3, 73 percent of enlisted personnel who are currently married have children (as do 10 percent of those not currently married). The corresponding figures are slightly higher for officers. Most Army families with children have one or two (Fig. 4). Nearly half of these Army children are under age 6 (Fig. 5). Of every 12 families with children, one family has a child who is temporarily or permanently handicapped.



Source: Defense Manpower Data Center, 1986a, Tables 3.9 and 3.10

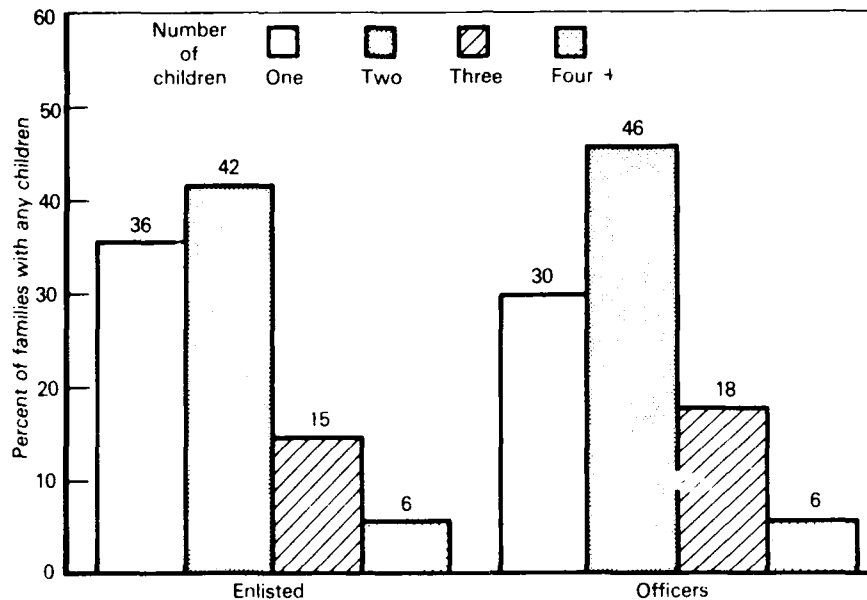
Fig. 2—Distribution of marriages by length, 1985



Source: Defense Manpower Data Center, 1986a, Tables 7.1 and 7.2.

Fig. 3—Percent of personnel who are parents, 1985





Source: Defense Manpower Data Center, 1986a, Tables 3.13 and 3.14.

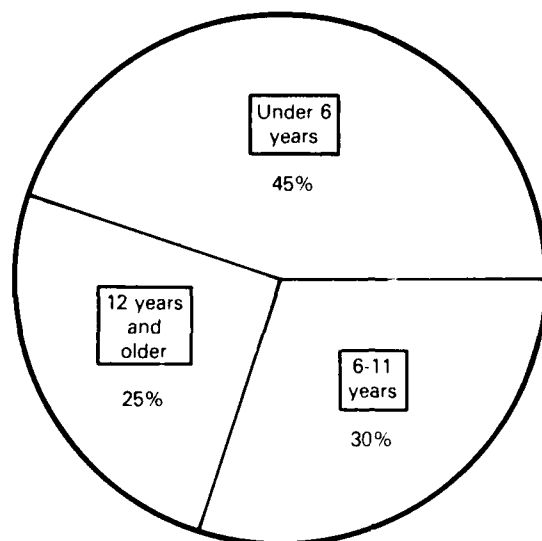
Fig. 4—Distribution of families with children, by number, 1985

In 1985, nearly two-fifths of all Army personnel were accompanied by dependent children. As seen in Fig. 6, accompaniment varies widely by the members' age: from one in ten among the (mostly unmarried) personnel under 21 to nearly half of those in their late twenties and two-thirds of those in their late thirties and early forties.

## SPOUSES<sup>2</sup>

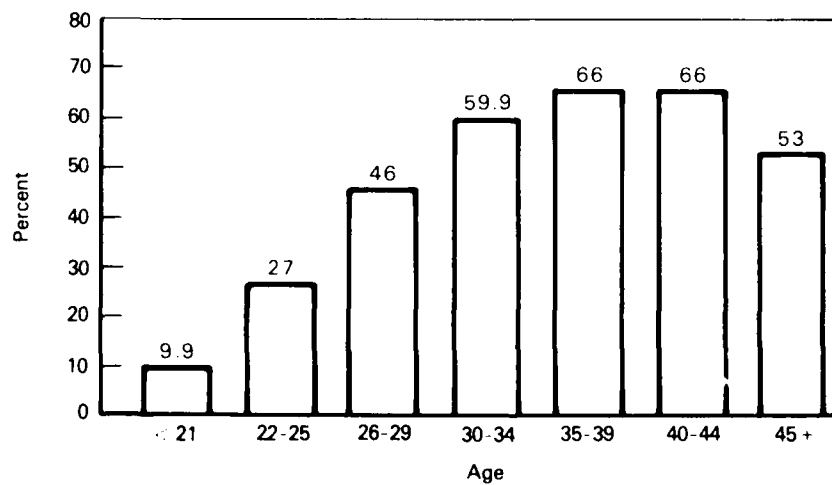
Army spouses are, by and large, young women who married at an early age. Spouses married to enlisted men are predominantly in their twenties; those married to officers are mostly in their thirties (Fig. 7). One in six Army female spouses was born outside the United States to nonmilitary parents. A smaller but still noteworthy fraction are non-citizens (almost always resident aliens): 11 percent of enlisted men's

<sup>2</sup>Our discussion in this subsection and the next one focuses on female spouses, who constitute over 19 out of 20 Army spouses.



Source: Tabulated from 1985 DoD survey of officers and enlisted personnel

Fig. 5—Distribution of Army children by age, 1985



Source: Tabulated from 1985 DoD survey of officers and enlisted personnel.

Fig. 6—Percent of all Army personnel accompanied by dependent children, 1985

spouses and 4 percent of officers' spouses. Furthermore, a language other than English is the main language spoken by 9 percent of enlisted men's spouses and 3 percent of officers' spouses.

Although most Army families consist of an enlisted man or officer and a civilian wife, attention has been attracted to the small but increasing fraction of families where both spouses are members of the active-duty force. In 1985, one of every 20 spouses married to enlisted men in the Army and one of every 30 officers' spouses were themselves currently on active Army duty. Moreover, 56 percent of married enlisted women and 60 percent of married women officers had spouses currently on active Army duty.

Somewhat over half of Army female spouses are in the labor force—that is, employed or seeking work. Labor force participation is comparatively lower among spouses with preschool-age children and higher among those whose youngest child is a teenager. Also, participation is substantially higher among spouses with more years of schooling.

Unemployment rates (calculated on the basis of persons in the labor force) are comparatively high for Army female spouses relative to their civilian counterparts. One-fourth of enlisted men's spouses and one-seventh of officers' spouses in the labor force were unemployed when surveyed. Mothers with preschoolers (over half of all enlisted men's spouses) experience especially high unemployment: 30 percent of those seeking jobs were not employed.

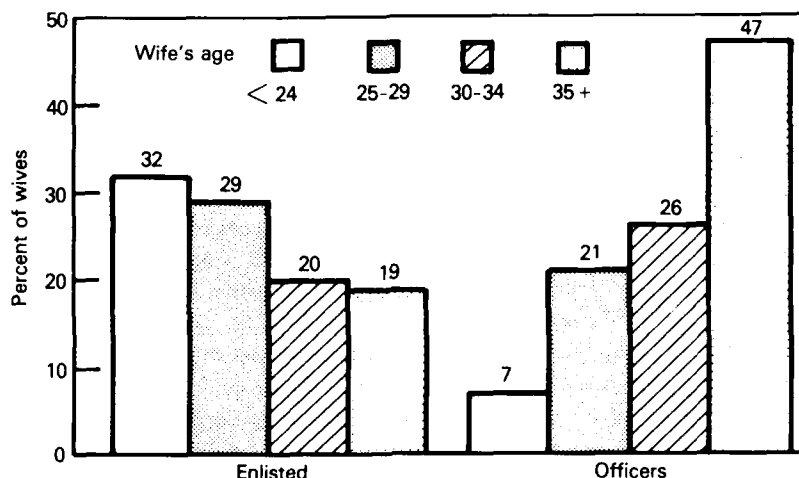
## TRENDS IN KEY FAMILY DOMAINS

Today's Army family reflects the broad transformations of American families generally. In this section, we explore trends in five domains of Army family life and relate those trends to civilian family trends where data are available. We examine these trends for all Army personnel (enlisted and officers) combined:

1. *Family formation.* Army personnel marry earlier than civilians of comparable age.
2. *Childbearing.* Army couples bear children somewhat earlier than do civilian couples, and have somewhat more children than their same-age civilian counterparts do.
3. *Family dissolution and remarriage.* Where marriages dissolve, single-parent Army families often result. Over time, the proportion of custodial single-parent families<sup>3</sup> headed by female members has risen.

---

<sup>3</sup>A custodial single-parent family is one where children usually live with the single parent.



Source: Defense Manpower Data Center, 1986, Tables 3.7 and 3.8.  
 Note: Data are for civilian wives only.

Fig. 7—Distribution of female spouses by current age, 1985

4. *Employment of female spouses.* Army spouses have joined the work force in growing numbers but are encountering more unemployment than previously.
5. *Stationing Abroad.* More family members are accompanying Army personnel at foreign stations.

To understand changes in Army families, it is useful to consider both the family-related *events* themselves (e.g., marriages, first births, or entries into the work force) and their *timing*, relative either to Army service or to some stage in the family life cycle. The events are what establish particular types of families—for example, single-parent, two-earner, or “blended” families (which join spouses and their children from one or more former marriages). The timing of these events determines the degree of overlap between family life and Army service—for example, raising preschoolers during one’s first term.

### Family Formation

Families typically are formed through marriage (although some are formed through single childbearing). Marriage is closely linked to age: The vast majority of Army personnel are (or have been) married by

their late twenties (Fig. 8). Army men marry earlier than civilian men of comparable age. For example, 45 percent of Army men in 1985 were married by age 22, compared with only 22 percent of civilian men. Army women display a mixed pattern: Below age 25, proportionally more are (or have been) married than their civilian counterparts, but above age 25 proportionally fewer have ever been married.

This early pattern of Army family formation persists, even though civilians have been marrying at progressively later ages in recent decades. By 1985, the median civilian age at first marriage<sup>4</sup> was 25.5 years for men and 23.3 years for women. Among Army personnel, the corresponding median ages were 20.7 years for men and 20.4 years for women.

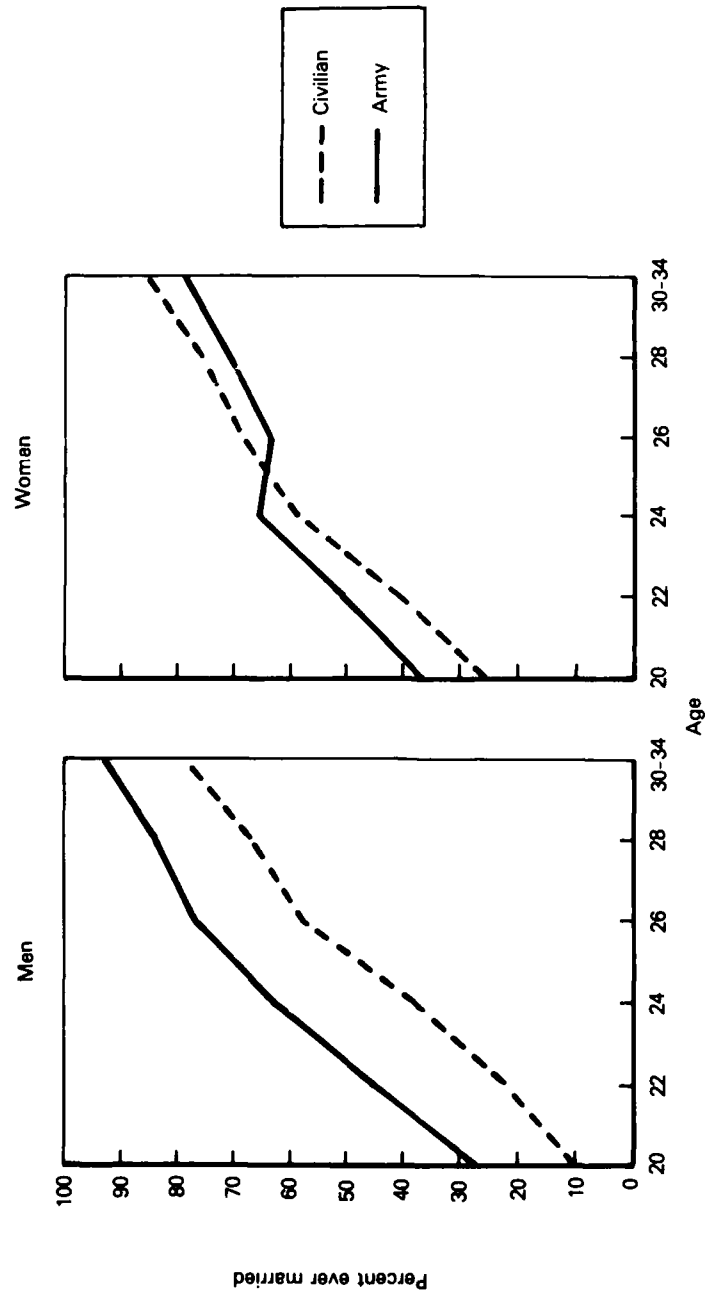
Figure 9 displays the shift toward delayed marriage for civilians and Army personnel. Army men continue to marry earlier than civilian men, and the gap between them has not narrowed. Furthermore, the curves representing the cumulative percent of men ever married at specific ages are uniformly lower in 1985 than in the earlier year measured (either 1979 or 1980).<sup>5</sup> For Army men under age 24 (which represents about half of all Army personnel), the downward shift has been only slight. At age 22, for example, 45 percent of Army men in 1985 had ever married, compared with 48 percent in 1979. Civilian men of this age registered an 8-point drop in five years, to 22 percent. Army women exhibit a complex pattern of change bearing no resemblance to its civilian counterpart. Indeed, above age 22 Army women display a slightly accelerating pattern, in contrast to the civilian shift toward delayed marriage.

Why do people who serve in the Army marry at comparatively young ages? There are several possible explanations:

- Certain population subgroups—e.g., persons with no more than a high-school-level education—inclined toward early marriage may be disproportionately represented within the Army.
- The Army may attract persons with distinct backgrounds and values conducive to early family formation. The employment, economic stability, and fringe benefits the Army offers may attract and retain certain types of persons who are strongly inclined to have families and favor the stability of Army

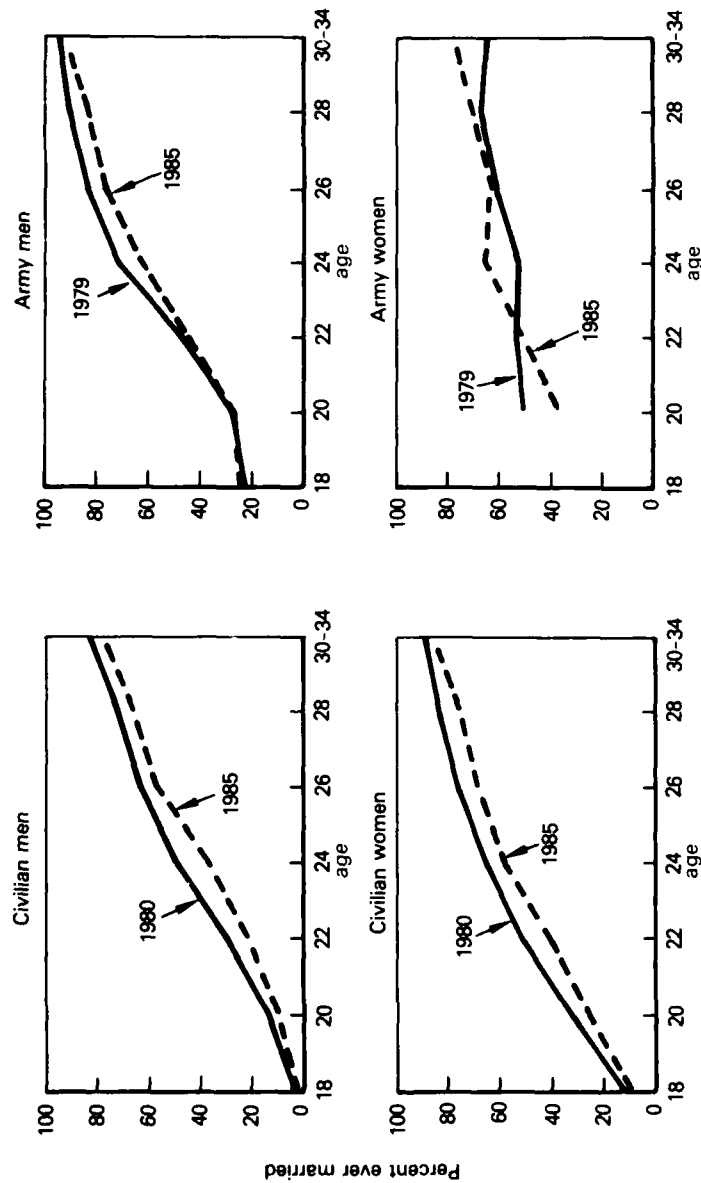
<sup>4</sup>The median age at first marriage is the age dividing the married population equally between half who married younger and half who married older.

<sup>5</sup>These two dates are keyed to the civilian data published by the Bureau of the Census; they are the closest approximation we can make to the 1979-1985 period of change reflected in the DoD Survey data shown in Fig. 9.



Sources: Civilian data from U.S. Bureau of the Census, 1986a, Table A-2; Army data tabulated from 1985 DoD survey of officers and enlisted personnel.

Fig. 8—Percent of civilians and Army personnel ever married at selected ages, 1985



Sources: Civilian data from U.S. Bureau of the Census, 1986a, Table A-2.  
Army data tabulated from 1979 and 1985 DoD survey of officers and enlisted personnel.

<sup>a</sup>No data on 18-year-old Army women because of insufficient sample size.

Fig. 9—Emergence of a delayed marriage pattern in early adulthood

employment over the less certain employment prospects in the civilian world.

- Initial Army experience may accelerate family formation. When first enlisting, the prospect of a prolonged separation from a fiancée may precipitate a marriage earlier than it would otherwise have taken place.

Further research would be needed to clarify how the Army environment and family formation decisions are related. Many soldiers marry during their first term, adding to the need for family-support services; a substantial proportion, though, do not reenlist. Army-specific incentives and disincentives may influence marriage or reenlistment decisions, but whether they do and how is not well understood. Clarification of this interaction would assist in formulating future Army family policies and anticipating how future policy changes might affect the number, size, and composition of Army families.

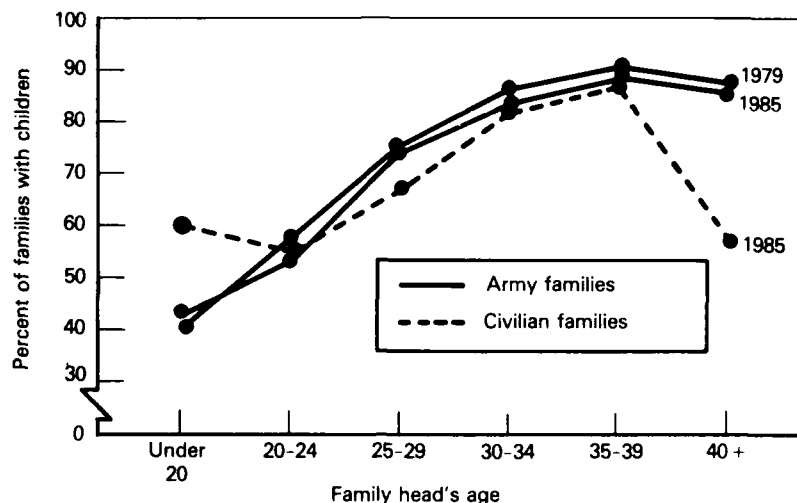
### Childbearing

In addition to marrying early, Army couples also bear children somewhat earlier in life than do civilian couples (Fig. 10). For example, 74 percent of currently married Army personnel aged 25–29 had children, compared with 66 percent of their 1985 civilian counterparts. Note that the Army pattern exhibited a slight delay in childbearing between 1979 and 1985, but proportionally more Army families than civilian ones had become parents by a given age.<sup>6</sup>

The data in Table 2, showing additional detail on comparative family size, highlight several further points. First, once beyond their mid-twenties, married Army members have somewhat larger families than their same-age civilian counterparts. For example, one-quarter of Army families headed by men aged 30–34 had three or more children, compared with only one-fifth of civilian couples with a husband of this age. Second, the majority of married Army women above their mid-twenties are mothers, although at every age the fraction of married Army women with children is considerably below the fraction of married Army men. Appendix Table B.1 shows how the distribution of

<sup>6</sup>Below age 20 and above age 40, the percentage of civilian families with children is markedly different from the percentage of Army families. The differences at the young ages may be attributable to self-selection into the Army. Above age 40, the civilian and Army measures are not strictly comparable because Army families headed by persons 40 and older are unevenly distributed within this age range, relative to their civilian counterparts.





Sources: Civilian data from U.S. Bureau of the Census, 1986b, Table 3. Army data tabulated from 1979 and 1985 DoD surveys of officers and enlisted personnel.

Fig. 10—Differences in the age at which Army and civilian families initiate childbearing (currently married Army personnel)

currently married Army families by size has changed between 1979 and 1985.<sup>7</sup>

There was a rapid increase in the number of Army women 26 and older between 1979 and 1985, and an increasing proportion were mothers. The data in Fig. 11 document a sharp increase since 1979 in the proportion of Army women with accompanying dependent children.<sup>8</sup> The increase has been greatest at the older ages, which is where the large numerical increase in Army women occurred during this period. Table 3 shows that as the ranks of Army women 22 and older rose from about 37,000 to 49,600 (a 34 percent increase), the number of women who had accompanying children climbed from fewer than 8,000

<sup>7</sup>Those data indicate that slightly higher proportions of married Army men at each age were still childless in 1985 than in 1979, and lower proportions had large (three or more children) families at the older ages. Both changes are in the direction of the current civilian pattern of later childbearing and smaller families.

<sup>8</sup>The data here refer to *all* women in the Army, regardless of present marital status.

to more than 16,000.<sup>9</sup> Of the 12,600 increase in this age range, 8,700 were Army women accompanied by children.

To summarize, two noteworthy developments shaping demand for Army family services have been identified: (1) the continuing early ages at which Army personnel establish and build families; (2) growth in the number of female Army members who are mothers with accompanying children.

### **Family Dissolution and Remarriage**

Families may dissolve through divorce and new families can be created through remarriage. Marital dissolution often produces single-parent Army families, and remarriage may add potential consumers of Army family services through the "blending" of families—for example, when a military member marries a civilian divorcee with young children. Army families will reflect all these trends, in both the changing composition of single-parent families and the rising prevalence of remarriage.

Single-parent Army families can be defined in several ways. The broadest definition would count any military member who reports having one or more dependent children and is not currently married. In 1979, there were 39,900 such personnel (88 percent men). In 1985, there were 40,400 such Army personnel (79 percent of them men). Most of these nominal single parents, however, are not accompanied by the child or children to whom they are parents. Indeed, many are not the custodial parent. A more meaningful definition of single-parent status in the Army is one that requires day-to-day responsibility for a child, without a spouse's assistance. Accordingly, we shall use a narrower definition of single parents as military members who are accompanied by children (have daily custodial responsibility) but are not currently married to and living with a spouse.<sup>10</sup>

Under this definition, there were approximately 12,700 custodial single parents in 1985, only slightly more than in 1979. The makeup of single parents, however, has shifted dramatically over this period

<sup>9</sup>Army women in the 30-34-year age bracket provide a striking illustration. In 1979, only 20 percent of 4,500 such women had any accompanying children, and only 3 percent had two or more of them. By 1985, 43 percent of 9,300 such women had accompanying children, and 18 percent had two or more of them.

<sup>10</sup>Such members may be divorced, separated, widowed, or never married. Our definition excludes large numbers of such personnel (particularly men) who report having dependent children who do not accompany them. Since we cannot ascertain whether the military member is the custodial parent, we use a custodial definition here: A military member is a single parent if he or she has day-to-day responsibility for a child, and a spouse is not present.

Table 2  
COMPARATIVE SIZE OF ARMY AND CIVILIAN FAMILIES,  
BY AGE, 1985<sup>a</sup>  
(Percent)

Age <sup>c</sup>	Families by Number of Own Children Under 18 <sup>b</sup>			
	None	1	2	3+
Under 20				
Civilian	40	45	14	1
Army				
Men	55	33	10	2
Women	79	19	2	—
20-24				
Civilian	46	32	18	4
Army				
Men	45	36	15	4
Women	58	32	7	3
25-29				
Civilian	34	31	26	10
Army				
Men	24	29	33	14
Women	46	32	17	6
30-34				
Civilian	19	25	36	20
Army				
Men	15	22	37	25
Women	36	30	23	11
35-39				
Civilian	14	22	39	25
Army				
Men	12	16	41	31
Women	40	19	26	15
40+				
Civilian <sup>d</sup>	43	26	20	11
Army				
Men	14	19	35	31
Women	42	22	17	19

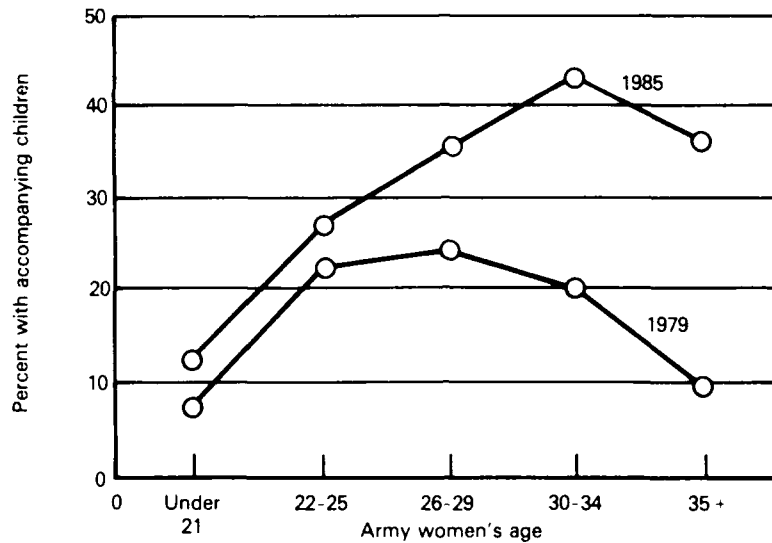
SOURCES: Civilian data from U.S. Bureau of the Census (1986b), Table 3. Army data tabulated from 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Married-couple families only.

<sup>b</sup>Individual cells may not total to 100 percent because of rounding.

<sup>c</sup>"Age" refers to the civilian who is the head of the family and to the Army member himself or herself.

<sup>d</sup>Limited to 40-54 for comparison.



Source: Tabulated from 1979 and 1985 DoD surveys of officers and enlisted personnel

Fig. 11—Percent of Army women with accompanying children  
(includes all marital status)

Table 3

NUMBER OF ARMY WOMEN<sup>a</sup> AGE 22 AND OLDER, AND ACCOMPANYING CHILDREN, 1979-1985

Woman's Age			Any Children		Two or More Children	
	1979	1985	1979	1985	1979	1985
22-25	20,600	21,600	4,400	5,900	1,200	1,200
26-29	9,100	13,400	2,200	4,700	400	1,500
30-34	4,500	9,300	900	4,000	100	1,700
35+	2,900	5,300	300	1,900	100	900
Total, 22 & older	37,000	49,600	7,800	16,500	1,800	5,600

SOURCE: Tabulated from 1979 and 1985 DoD Surveys of Officers and Enlisted Personnel.

<sup>a</sup>Includes women of any marital status. Since both DoD surveys excluded recent enlistees, comparisons here are restricted to women age 22 and older. Numbers are sample-based estimates, rounded to nearest 100.

(Table 4). In 1979, three-fourths of custodial Army single parents were men; by 1985, though, the proportions of men and women were much more nearly equal. There also was a decided reduction in the fraction of such families with children of preschool age—from 77 percent to 62 percent over this period. The reduction was mostly in male-headed single-parent families. In terms of size, 45 percent of male single-parent families contained two or more children; less than one-fourth of the female ones did.

Single parenthood within the Army, then, is in a state of flux. Increasingly, such families are *female-headed* and also differentiated by gender. That is, the female single-parent family typically contains just one child, usually under age 6; the male-headed one often contains two or more children. These changes could foreshadow changing service needs for the previously married (or never married) single Army parent

Table 4  
CHANGING MAKEUP OF SINGLE-PARENT<sup>a</sup> ARMY  
FAMILIES, 1979 AND 1985  
(Percent)

Measure	1979 (n = 12,000)	1985 (n = 12,700)
Distribution by sex		
Male-headed	74	54
Female-headed	26	46
Child under age 6		
Male-headed	77	54
Female-headed	77	71
All single-parent families	77	62
2+ children		
Male-headed	46	45
Female-headed	18	23
All single-parent families	39	35

SOURCE: Tabulated from 1979 and 1985 DoD Surveys of Officers and Enlisted Personnel.

<sup>a</sup>A single-parent Army family is defined as an Army member who is accompanied by one or more dependent children and not currently married to and living with a spouse. The member may be divorced, separated, widowed, or never married. The children may be natural or adopted. This custodial definition excludes parents who do not have day-to-day responsibility for an accompanying child, even though such parents may technically be considered single parents under another definition.

and the children (natural or adopted) for whom the parent has custodial responsibility.

We can gain further insight into the increasing proportion of women among single Army parents by noting how the marital status of Army men and women differs. Table 5 shows the fraction of Army men and women reported as divorced or separated on each of the two DoD Surveys. For 1985 (but not 1979), the survey also showed remarried individuals separately within the "currently married" category. Among Army men, the fraction currently divorced or separated peaks at 9-10 percent near age 30, then tapers off slightly at older ages. (These levels are approximately the same as those for civilian men at these ages.) Among women, this percent is more than twice as high, reaching 19 percent in the late twenties and peaking at even higher levels at older ages. These levels for women are 40 to 60 percent higher than those

Table 5  
COMPARISON OF SELECTED CURRENT MARITAL STATUSES, BY GENDER  
(Percent)

Age	Divorced/Separated				Remarried	
	Men		Women		Men	Women
	1979	1985	1979	1985	1985	1985
Under 20	1	1	0	3	0	0
20-21	3	3	5	5	0	1
22-24	5	5	13	11	2	5
25-29	9	9	19	19	9	12
30-34	9	10	31	24	21	19
35-39	7	9	19	29	28	20
40 & older	9	7	16	27	26	15
All ages						
Percent	7	7	14	15	11	9
No. (000)	41.1	39.4	7.1	9.7	67.3	6.0

SOURCES: Tabulated from 1979 and 1985 DoD Surveys of Officers and Enlisted Personnel.

for civilian women at these ages.<sup>11</sup> At every age, then, proportionally more Army women than men are currently divorced or separated; among women 25 or older, the percentage is 19 or higher. Nearly half of these women are mothers.

Marital disruption is more commonplace than shown here, of course, since these data index respondents' *current* marital status when surveyed. As shown in the right-hand portion of Table 5, many of the other men and women were remarried when surveyed in 1985. Comparing the 1985 fraction divorced/separated with the fraction remarried indicates that, following divorce, Army men tend to remarry more than do Army women. Overall, there were seven remarried Army men for every four who were currently divorced/separated (67,300 and 39,400 respectively). There were only three remarried Army women, however, for every five currently divorced/separated ones (6,000 and 9,700 respectively).

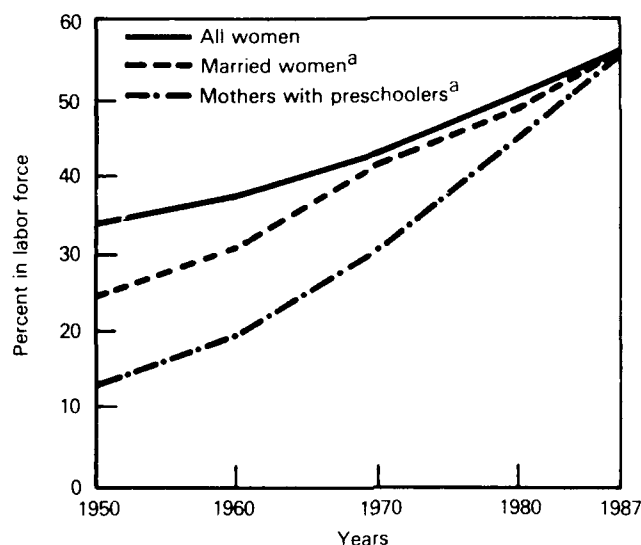
As a group, then, formerly married Army women are less prone than their male counterparts to remarry. This difference has several potential explanations, including self-selection. For Army women (especially those with children) whose marriages break up, there may be a strong incentive to remain in the Army pending possible future remarriage. The economic incentives—stable employment, health care, schooling for children—may encourage them to reenlist. Self-selection offers one plausible explanation, but for now it is no more than a hypothesis. In any case, this noteworthy difference between Army women and men merits further study to ascertain its implications for future service demand.

### Employment of Female Spouses

Army spouses, like the wives of civilians, have joined the work force in growing numbers. Among civilians, this sharp influx in recent years has delayed childbearing and also reshaped the traditional division of labor between spouses. The traditional full-time homemaker no longer is a common female occupation. Instead, homemaking's various functions—meal preparation, childcare, home repair and maintenance—are fragmented and "contracted out" to commercial providers.

Among civilians, only 31 percent of married women (and a mere 19 percent of those with preschoolers) were in the labor force as of 1960 (Fig. 12). By 1985, these fractions had reached approximately 55 percent. Among military female spouses (all branches), labor force participation has risen even more sharply, advancing from 30.5 to 50.2 per

<sup>11</sup>U.S. Bureau of the Census, 1986a, Table 1.



<sup>a</sup>Currently married, husband present  
 Source: Bureau of Labor Statistics

Fig. 12—Rise in labor force participation of wives and mothers, 1950-1987

hundred military female spouses in the single decade from 1970 to 1980.<sup>12</sup>

Behind these increases is a fundamental generational change, illustrated in Fig. 13. For each more recent generation of civilian women, a progressively higher fraction has joined the work force at a comparable age. For example, considering women now in their thirties, nearly two-thirds of this generation participate in the labor force, and more than half of these women were participating when 20-24 years old. The rates registered by this generation are substantially above those registered by the generation of women now in their forties. Among the most recent generation (women currently in their twenties), a record high two-thirds have joined the work force. What these data show, then, is mature generations of women (who joined the work force later in life, if at all) being replaced by younger generations, most of whom enter the work force early in adulthood. It is these younger generations, where participation rates are reaching new highs, who will be tomorrow's job-seeking Army spouses.

<sup>12</sup>Grossman, 1981, pp. 60-64.



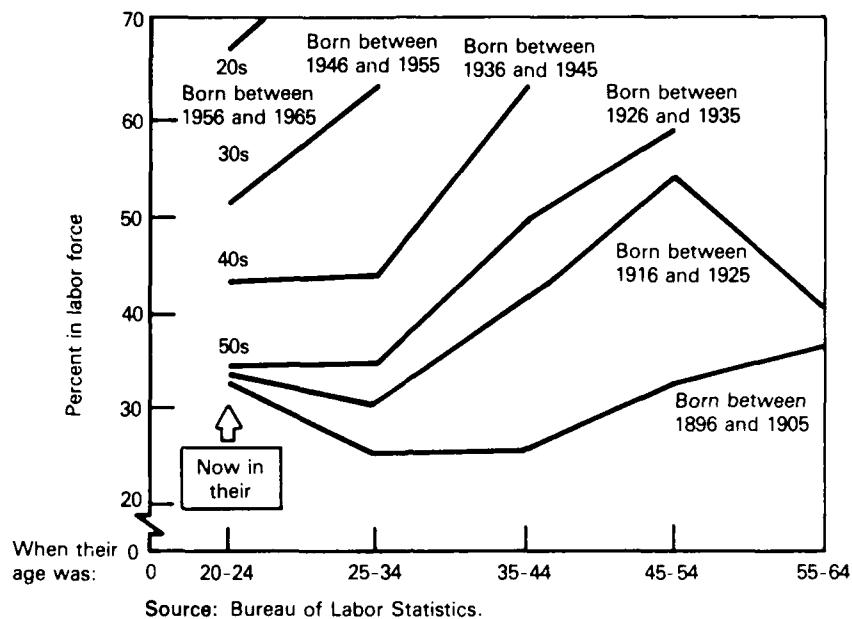


Fig. 13—Working lives of women: Changes across generations

The rising labor force participation of married women has increased the fraction of married couples in which both spouses are wage earners. Among civilian couples, this fraction rose from 52 percent in 1977 to approximately 64 percent by 1985, increasing in turn the flow of dollars into family budgets and gradually altering the division of labor within families. Both changes generate growing demand for purchased services, such as childcare and recreation programs after school.

Army spouses' involvement with the workplace has registered a parallel increase. According to data from the Military Members Survey, the labor force participation of female spouses rose from 47.5 percent in 1979 to 56.0 percent in 1985.<sup>13</sup> (For all U.S. wives 16 to 44

<sup>13</sup>Data from the Survey of Spouses (which elicited information on labor force participation directly from the spouses themselves) register female spouses' participation at 56.7 percent in 1985. In general, there is close agreement between the male military members' descriptions of spouses' labor force activity (reported on the Military Member Survey) and the spouses' own descriptions of their activity (reported on the Spouse Survey). We have opted to rely on the Member Survey, since it was conducted at two separate points (1979 and 1985), enabling us to measure change over time.

Spouses in the labor force include all spouses who report (or are reported as) currently having full-time, part-time, military, or self-employment; as being with a job

years old, the comparable increase over this same period was from 59 percent to 66 percent.) The 1985 participation rate for Army female spouses is 4 percentage points above the labor force participation rate for military female spouses in all service branches, which stood at 52 percent in 1986.<sup>14</sup> Female Army spouses, then, appear to participate in the work force at a rate below that of comparably aged civilian wives but above that of female military spouses in other services.

Their 1985 participation patterns and unemployment levels are detailed in Table 6. The Army itself is a substantial source of employment: 6 percent of the female spouses of military members also serve in the armed forces, virtually all of them with the Army. (More generally, the federal government provides three of every ten jobs female spouses hold.)

The data in Table 6 also show that female spouses 25 and under register higher rates of unemployment than the average for all Army female spouses (18 percent). Among the likely reasons for high unemployment are: frequent transfers of their husbands, which place many military spouses at a labor market disadvantage by introducing breaks in their job careers; potential job discrimination because of the likelihood of unexpected transfers; inadequate or inappropriate job opportunities in certain locales; and difficulties in arranging suitable child-care.

Table 7 compares age-specific unemployment rates for Army female spouses accompanied by a preschool-age child with rates for those who have no accompanying children. These data show that unemployment is especially widespread among young mothers with accompanying preschoolers.

As seen in Fig. 14, the unemployment rate for female spouses rose sharply between 1979 and 1985, from 11.7 to 18.1 percent.<sup>15</sup> This rising rate of unemployment in conjunction with a massive influx of young female spouses into the labor force nearly doubled the fraction of all female spouses wanting to work but lacking a job. By 1985, 10.1 percent of *all* female spouses in the Army were in the work force but without a job.

---

but temporarily ill, on vacation, on strike, etc.; or as being unemployed. Excluded from the work force are those who report being homemaker, unpaid worker, in school, retired, or "other."

<sup>14</sup>The 1986 rates for all military female spouses and for civilian wives 16 to 44 years old derive from the March 1986 Current Population Survey. See Hayghe, 1986, pp. 31-33.

<sup>15</sup>There was only a minuscule increase (from 5.9 to 6.3 percent) for all civilian wives 16 to 44 years old.

Table 6  
FEMALE ARMY SPOUSES' CURRENT ACTIVITY, BY AGE, 1985  
(Percent)

Spouse's Age	In the Labor Force					Not in Labor Force <sup>b</sup>		Rate of Unemploy- ment <sup>c</sup>
	Working Full-time <sup>a</sup>	Working Part-time	Self- Employed	In Armed Forces	Unemployed	Total	Total	
Under 21	13.3	13.7	2.0	7.3	14.6	49.1	100	29
22-25	20.7	11.9	1.9	8.7	12.4	44.4	100	22
26-29	25.4	11.5	2.6	7.3	9.4	43.9	100	17
30-34	26.2	14.6	3.3	4.4	8.6	42.9	100	15
35+	32.1	15.6	3.1	1.7	6.6	41.0	100	11
All Ages	24.0	13.5	2.6	5.7	10.1	44.0	100	18

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Includes workers reportedly "with a job, but not at work because of temporary illness, vacation, strike, etc."

<sup>b</sup>Includes homemaker, unpaid worker (volunteer or in family business), in school, retired, or other.

<sup>c</sup>Percent of spouses in the labor force who are unemployed.

Table 7  
UNEMPLOYMENT RATE AMONG  
FEMALE ARMY SPOUSES, 1985

Spouse's Age	Accompanied by	
	Child < Age 6	No Child
Under 21	46	22
22-25	31	16
26-29	18	16
30-34	19	16
35+	17	11
All ages	26	17

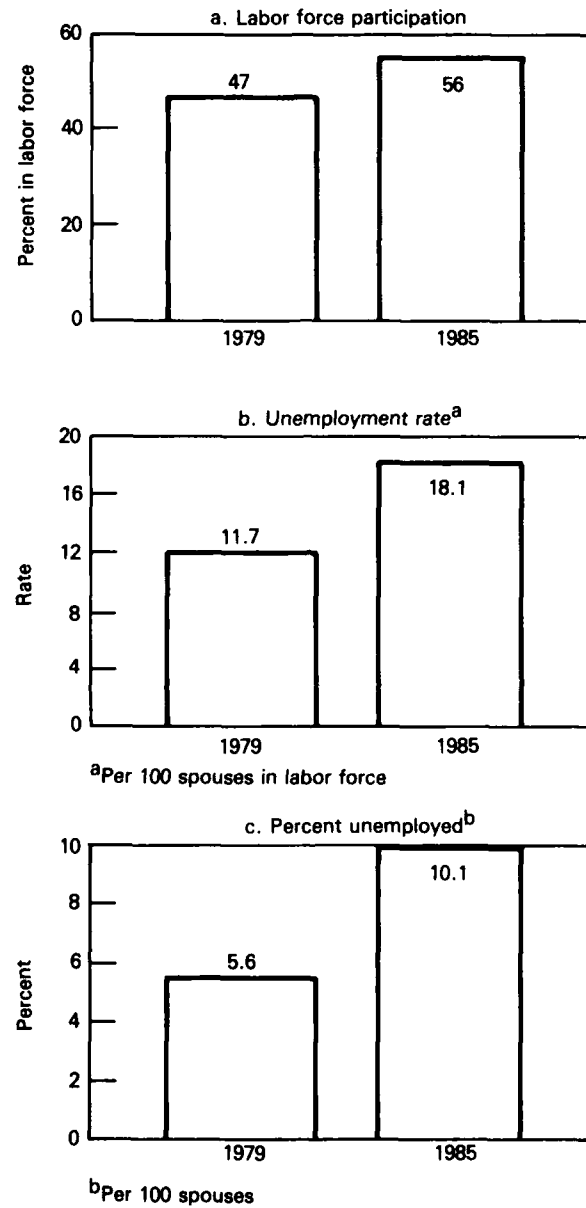
SOURCE: 1985 DoD Survey of  
Officers and Enlisted Personnel.

Figure 15 displays these trends for specific age groups. The data highlight the rapid growth of unemployment among the youngest Army spouses.

Employment opportunities for Army spouses are an increasingly critical factor to satisfactory economic adjustment to Army life. In an era when married women's earnings represent a substantial fraction of family income, the seemingly increasing labor market difficulties that female Army spouses encounter may have serious economic consequences for their families and may affect the Army's continuing ability to retain more experienced and highly skilled personnel.

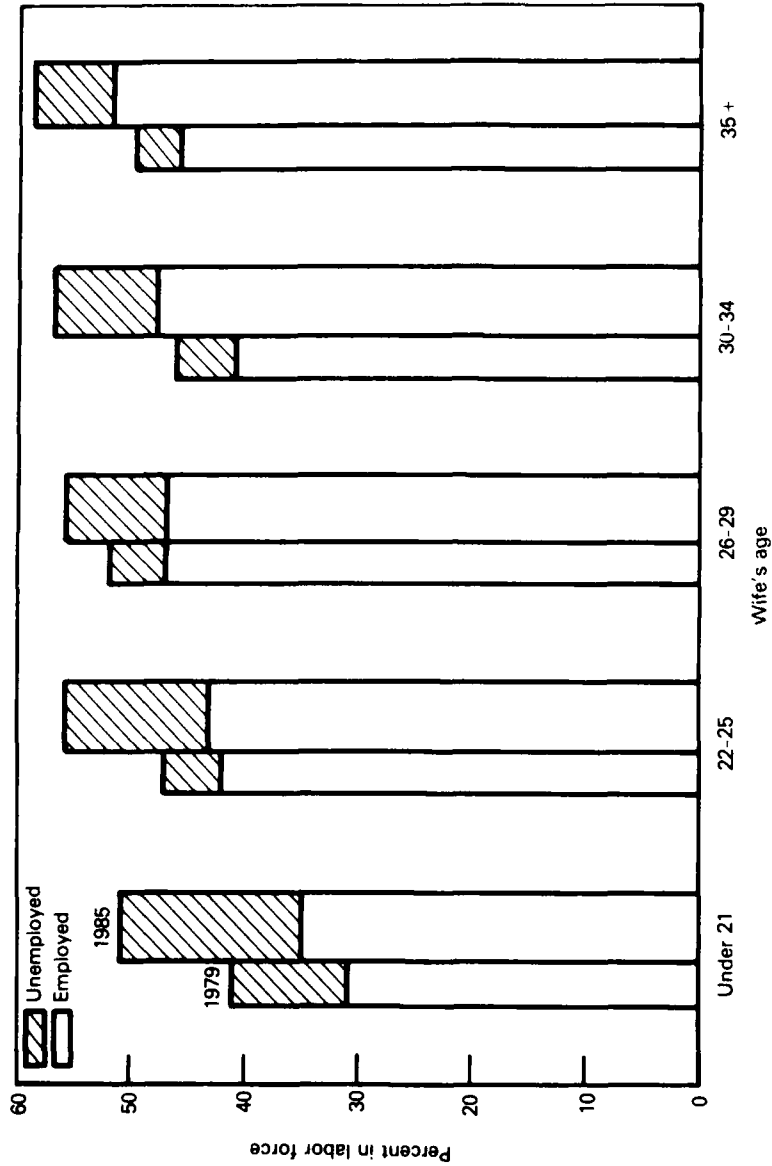
In 1985, 7 percent of female Army spouses were foreign-born women (two-thirds of whom were born to nonmilitary parents). Their presence creates special types of needs. For example, the main language spoken at home is English for only 63 percent of Army spouses born outside the United States to nonmilitary parents (Fig. 16). For this small fraction (about 4 percent of all Army families), language difficulty may be a formidable daily obstacle.

Foreign-born female spouses are less often in the labor force than their native-born counterparts, as seen in Fig. 16. Nevertheless, 22 percent of those who are in the labor force have no job. Further details on these points are shown in Table 8.



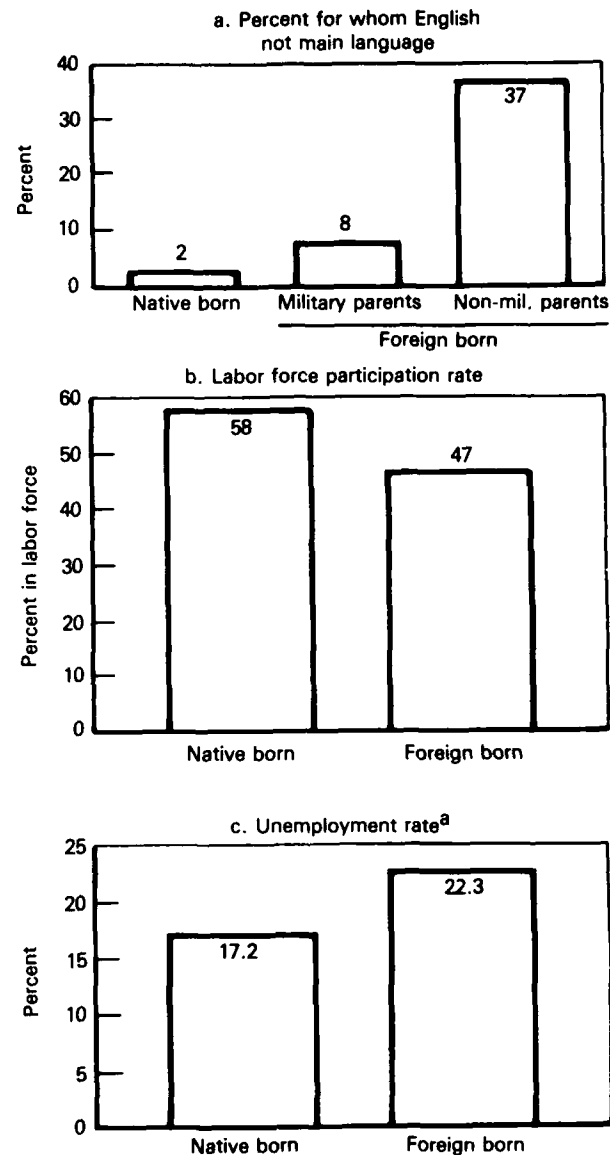
Source: Tabulated from 1979 and 1985 DoD surveys of officers and enlisted personnel

Fig. 14—Key changes in female spouses' current activities, 1979–1985



Source: Tabulated from 1979 and 1984 DoD surveys of officers and enlisted personnel.

Fig. 15—Rise in labor force participation and unemployment among female spouses, 1979-1985



Source: Tabulated from 1985 DoD survey of officers and enlisted personnel.

<sup>a</sup>Per 100 spouses in labor force.

Fig. 16—Key differences between native- and foreign-born female spouses: 1985

Table 8  
FEMALE SPOUSES' CURRENT ACTIVITY, BY NATIVITY, 1985  
(Percent)

Wife's Nativity	In the Labor Force				Not in Labor Force <sup>b</sup>	Total	Rate of Unemploy- ment <sup>c</sup>
	Working Full-time <sup>a</sup>	Working Part-time	Self- Employed	In Armed Forces	Unemployed		
Foreign born	20.6	11.4	2.1	2.3	10.4	53.2	100
Native born	24.9	14.0	2.7	6.6	10.1	41.6	100
Both	24.0	13.5	2.6	5.7	10.1	44.0	100

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Includes workers reportedly "with a job, but not at work because of temporary illness, vacation, strike, etc."

<sup>b</sup>Includes: homemaker, unpaid worker (volunteer or in family business), in school, retired, or other.

<sup>c</sup>Percent of wives in the labor force who are unemployed.



### Stationing Abroad

Army families stationed outside the continental United States (OCONUS) do not differ markedly in their structure and makeup from those stationed within the United States (CONUS). The accompaniment of dependents, however, does vary (Table 9). Whereas 89 percent of CONUS-based married personnel were accompanied by the spouse, 85 percent of those stationed in Germany and 74 percent of those stationed elsewhere in the world were. Accompaniment rates among children are lower (by 16 percentage points) at each location. Overall, 32 percent of all accompanying Army children reside at stations abroad, four-fifths of them in Germany. Accompaniment rates are highest for preschool-age children and lowest for teenage children, regardless of station location.

The underlying dependency rate is lower among personnel stationed in Germany. Proportionally fewer are married and they have fewer dependent children per 100 personnel relative to personnel in CONUS or elsewhere. (The difference stems from the higher percentage in

Table 9

#### INDICATORS OF FAMILY ACCOMPANIMENT IN 1985, CONUS VS. ABROAD

Variable	CONUS	Germany	All Other Stations <sup>a</sup>
<b>Spouses</b>			
% currently married	64	59	63
% whose spouse accompanies	89	85	74
<b>Dependent children</b>			
Children per 100 personnel	104.0	90.3	102.2
No. of children (000)	434.0	173.7	46.1
No. accompanying (000)	315.1	120.4	26.8
% of children accompanying:			
All ages	73	69	58
< 6	76	72	64
6-11	73	68	56
12+	67	65	49

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Includes Korea.

Germany who are nonparents and the slightly smaller families of those who are parents.)

Approximately 173,700 Army children have a parent who is stationed in Germany; of these, 69 percent accompanied their parent to Germany. Of approximately 46,100 children with a parent stationed elsewhere abroad, however, only 58 percent accompanied them. One reason that accompaniment rates abroad are lower is that larger families—particularly those with three or more children—tend to remain behind. For example, among personnel stationed in Germany, 86 percent of children who were the only dependent child accompanied the parent, whereas only 59 percent of children in families with three or more dependent children accompanied (see App. Table B.2). Thus, increased future accompaniment of children might come about through further increases in the accompaniment of one-child families (which already is high) or of multi-child families (where there is further room for increase).

How have accompaniment rates changed over time? Table 10 provides selected comparisons for 1979 and 1985. The first measure,

Table 10

AGGREGATE CHANGES IN THE NUMBER AND LOCATION  
OF ARMY CHILDREN, 1979-1985

Variable	CONUS	Germany	All Other <sup>a</sup>	Total
Children per 100 personnel				
1979	102.6	95.9	98.0	100.6
1985	104.0	90.3	102.2	99.8
% accompanying				
1979	70	59	49	66
1985	73	69	58	71
No. accompanying (000)				
1979	333.5	100.6	21.3	455.4
1985	315.1	120.4	26.8	462.4
Distribution by location (percent)				
1979	73.2	22.1	4.7	100
1985	68.2	26.0	5.8	100

SOURCE: Tabulated from 1979 and 1985 DoD Surveys of Officers and Enlisted Personnel.

<sup>a</sup>Includes Korea.

children per 100 personnel, rose slightly over time, except among personnel stationed in Germany. The percentage of children who accompany the Army parent has risen noticeably for personnel stationed abroad. The rising accompaniment rate OCONUS, plus more personnel stationed abroad, has increased both the number and proportion of Army family members residing abroad. In Germany, for example, the number of accompanying children rose 20 percent (approximately 20,000) between 1979 and 1985, and the fraction of all Army children abroad increased from 26.8 to 31.8 percent.

Table 11 compares the age makeup of Army personnel stationed at CONUS and OCONUS locations. A disproportionate fraction of those stationed in Germany are concentrated in the prime childbearing ages (20–29 years). Armywide changes in family-related behavior (e.g., timing of marriages, entry of young female spouses into the work force) may manifest themselves more sharply among these comparatively younger families stationed in Germany.

Table 11

DISTRIBUTION OF ARMY PERSONNEL BY AGE  
IN 1985, CONUS VS. ABROAD  
(Percent)

Age	Station Location		
	CONUS (n = 417,409)	Germany (n = 192,245)	All Other <sup>a</sup> (n = 45,163)
Under 20	6.0	5.7	5.1
20–24	34.1	40.4	32.4
25–29	21.8	26.2	25.1
30+	38.1	27.7	37.4

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Includes Korea.

### III. PROJECTIONS OF ENLISTED ARMY FAMILIES

In this section, we examine several plausible futures that might materialize by the year 2000. To do so, we prepare a projection of family members in two stages. The first stage accounts for the evolution of the force's structure through changes in recruitment and retention policies and economic conditions, factors that will alter the proportion of Army personnel at particular years of service. Given the projected force structure, in the second stage we explore several alternative assumptions about forthcoming changes in Army families. Our purpose is to provide some feel for how potential behavioral changes (induced by Army policies and practices or possibly other determinants) could influence the future. In this second stage, we concentrate on: (1) the timing of family formation and growth during early years of service, which can heighten or reduce the incidence of marriage and childbirth during early terms of service; and (2) numbers of dependents and children per hundred Army personnel at particular lengths of service. Throughout both stages, our analysis of these assumptions and the resulting scenarios will be limited to *enlisted personnel* only.

Briefly, then, our assumptions define the *likely* future force structure and then delineate *plausible* developments in families. These hypothetical developments broaden our perspective by suggesting how certain developments could alter future forecasts based on force structure alone.

#### EVOLUTION OF FORCE STRUCTURE

In considering how the aggregate characteristics of Army families may change, we must take the evolution of the force's distribution by length of service into account. That distribution affects the proportions of Army personnel who are at the "pre-marriage" ages, the "family building" ages, and so forth. Given the concentration of personnel around these earlier stages in life during the first few terms of Army service, changing force structure constitutes a variable of prime relevance. Of particular importance is the extent to which the previous shift toward a more senior force continues in the future, and the resulting effects on the number of Army dependents.

Over the past 12 years, the YOS distribution for enlisted personnel has shifted markedly toward proportionally more experienced personnel and fewer junior personnel (see App. A). In 1973, 425,000 personnel (62 percent of the enlisted force) were in the first three years of service, compared with only 304,000 (46 percent) in 1986. Clearly, an enlisted force with proportionally more first-termers will have younger children and fewer dependents overall, other things equal.

Understanding why the experience distribution has changed in the past is a prerequisite to making sound forecasts of the future. Previous research (Hosek, Fernandez, and Grissmer, 1984) has identified five distinct factors:

1. The transition to an all volunteer force and the accompanying longer retention of volunteers relative to draft-induced personnel.
2. Higher real levels of basic military pay, allowances, and bonus payments since 1979, which substantially increased first- and second-term retention.
3. Higher levels of unemployment in the early 1980s, which boosted retention to unprecedented levels.
4. Uncommonly large accession cohorts in the 1973-1978 period, which are now flowing into the senior career force.
5. The standards the Army established for reenlistment eligibility at the first and second term.

The first three factors each led to higher levels of first- and second-term retention, swelling the enlisted personnel population with members between four and ten YOS. (The data in Fig. 17 illustrate this trend for nonblack male high school graduates.) Gradually, the higher retention rates reduce the number of accessions needed to maintain a force of a given size. Fewer accessions, in turn, reduce the number of personnel in the early years of service. Thus, accession levels declined from 200,000 in 1973 to approximately 126,000 in 1986 (see Fig. 18).

The Army can also control the flow of personnel into the second and third term through "up or out" criteria and by imposing quantitative criteria for reenlistment eligibility. These criteria give first priority to the highest quality personnel in order to build a quality career force.<sup>1</sup> Such controls can greatly influence the flow of personnel into the

<sup>1</sup>The first criteria refer to required pay grade attainment through promotion in order to be eligible to reenlist. For instance, a person who does not achieve a grade of E3 by three years and E4 by eight years of service may be denied reenlistment eligibility. The quantitative criteria for reenlistment usually involve achievement of minimum scores on aptitude and Skill Qualification tests, and/or educational attainment.

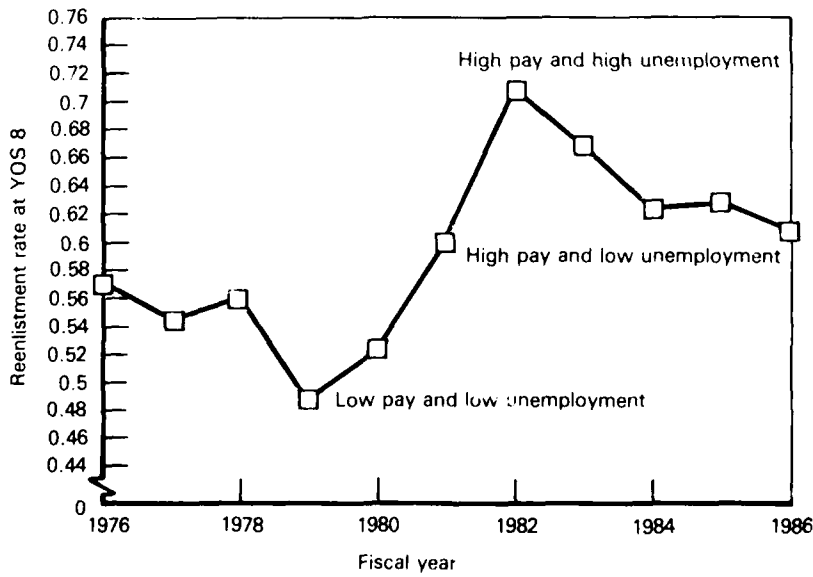
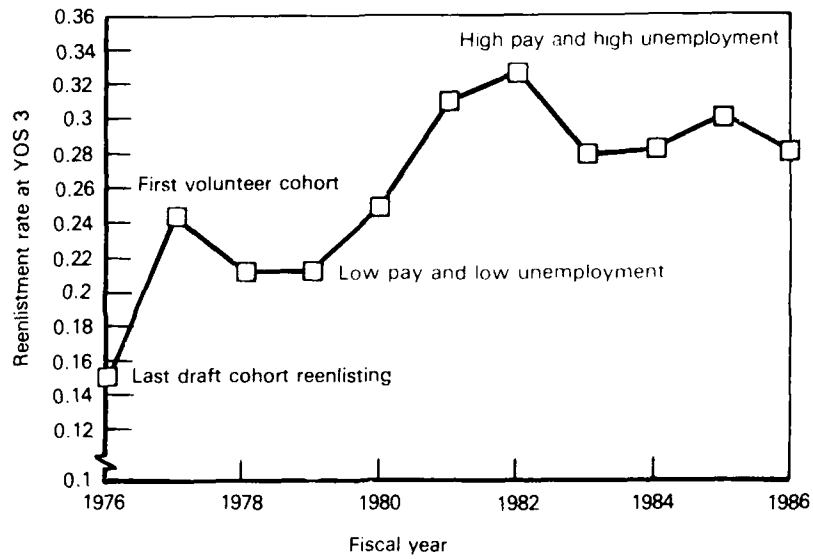


Fig. 17—First and second term reenlistment rates, 1976–1986

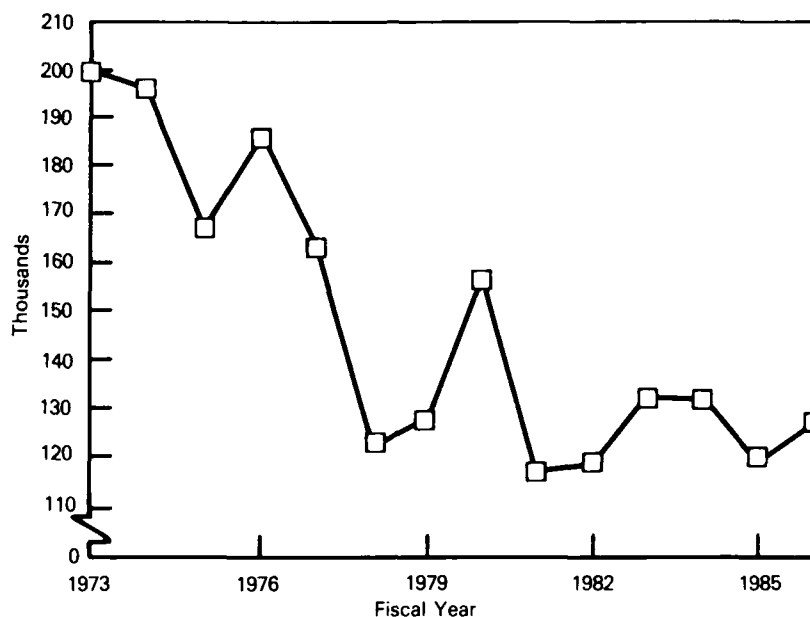


Fig. 18—Army accessions, 1973–1986

career force and typically are tightened during periods of higher retention.

Our projections of the length-of-service structure rest on several assumptions (summarized in Table 12) that accord with our view of the Army in the foreseeable future.<sup>2</sup> First, we foresee that the concept of an “Army of Excellence” continues to drive Army management of enlisted personnel. In the last six years, this has meant keeping accession requirements low enough to maintain selectivity and thereby achieve very high quality accessions.<sup>3</sup>

In recent years, retention rates have been sufficiently high that standards were tightened and accession levels have still been kept low. However, if military pay levels fall relative to civilian opportunities, the Army may have to choose between lowering reenlistment standards or accepting declines in accession quality. A major emphasis of our

<sup>2</sup>For further detail on the structure of our projection model, see App. C.

<sup>3</sup>For example, high school graduate percentages among accessions have risen in the last eight years from 55 to 90 percent as accessions have fallen and recruiting resources and strategies have changed.

Table 12

## ASSUMPTIONS FOR PROJECTING LENGTH-OF-SERVICE STRUCTURE

Factor	Projection <sup>a</sup>		
	High	Medium	Low
Ratio of military to civilian pay	equals FY86 ratio	2.5 percent decline over 5 years (no catchup raise)	5 percent decline over 5 years (no catchup raise)
End of period end strength	666,200	666,200	666,200
Unemployment rate (all workers, percent)	6.9	6.9	6.9

<sup>a</sup>Further details on the model may be found in unpublished RAND research by Corazon Francisco, David Grissmer, and Richard Eisenman.

projection scenarios is the effects such declines in military pay will have on enlisted force distribution.

Another aspect of Army enlisted force management that can affect projections is its "implicit contract" with personnel, which confers the right to stay voluntarily until retirement after a minimum length of service. This factor is important because projections indicate marked growth in the number of enlisted personnel with between 10 and 20 years of service. Although this will increase the number of senior personnel to unprecedented levels, we assume that the Army will not substantially change reenlistment standards for this group because of concerns for fairness and its acceptance of an implicit contract after 10 years of service. Changes in these policies would considerably alter projections.

Apart from Army policies, two additional factors determine enlisted force distribution: Congressional priorities and the civilian labor market conditions. Congress determines military pay levels and service end strengths. Army enlisted end strength has remained fairly stable for the last ten years, despite record levels of defense spending in the last eight years. Basically, growth in the Army has been confined to the Army Reserve components. It is extremely unlikely that with current budget deficits and declining growth in defense spending Army



enlisted strength will grow, so we assume (perhaps optimistically) that enlisted end strength will remain constant over the next 14 years.

Finally, we need to make assumptions about military pay levels relative to civilian pay and civilian unemployment levels. Of the two, unemployment is far less influential in shaping long-term enlisted force distribution. Because unemployment tends to be cyclical, it creates periodic fluctuations in retention rates but only minor long-term variation. Retention rates are also much less sensitive to changes in unemployment than to changes in pay.

Changes in the ratio of military to civilian pay are influential in the long term. Congress determines military pay annually. In recent years, it has kept pace with changes in the consumer price index and perhaps increased with respect to civilian earnings. During the middle and late 1970s, however, military pay declined in real terms by almost 10 percent relative to civilian earnings. Sizable real pay raises in 1980 and 1981 restored military pay to levels of the early 1970s, and Congress has maintained this parity. However, pressures to reduce the budget deficit may intervene and allow some decline in military pay. Such declines may be accompanied by somewhat larger bonus budgets in order to offset some of the retention effects of the decline.

We explored these unknowns by positing three pay scenarios affecting future enlisted force structure: (1) *high*, which envisions a stable ratio of relative military to civilian pay at FY86 levels; (2) *medium*, which envisions a 2.5 percent decline in that ratio over the next five years; and (3) *low*, which envisions a 5 percent decline. The medium pay scenario is intended to reflect our best estimate of future force structure. (We regard sharper declines as politically unlikely, given the experience in the late 1970s.) The two pay decline scenarios envision no subsequent restoration to previous levels.

The numerical results of the three projections are given in Table 13. Figure 19 summarizes the historical and projected evolution of the enlisted force from 1975 to 2000, based on the medium pay scenario. The major changes in distribution were in the 1975 to 1986 time period, when the number of younger personnel dropped sharply and the number with between 5 and 15 YOS rose. The changes projected to occur in the next 14 years are small by comparison, with the largest ones in the 16 to 30 YOS group. *Because the latter group constitutes only a small portion of the force, changes in the sizes of these groups will have little effect on the aggregate number of dependents.* However, such changes will accentuate needs that are specific to the families of more senior personnel—e.g., resources and programs for children of high school age.

Table 13

**ALTERNATIVE PROJECTIONS OF ARMY ENLISTED FORCE STRUCTURE  
UNDER HIGH, MEDIUM, AND LOW PAY SCENARIOS**

Years of Service	1975	1985	Year 2000		
			High	Medium	Low
1	162.7 (24.0)	108.9 (16.4)	110.2 (16.5)	112.6 (16.9)	115.0 (17.3)
2-4	288.3 (42.5)	254.3 (38.2)	234.3 (35.2)	238.8 (35.8)	243.2 (36.5)
5-8	91.4 (13.5)	126.5 (19.0)	123.0 (18.5)	121.7 (18.3)	120.4 (18.1)
9-12	41.6 (6.1)	79.3 (11.9)	72.7 (10.9)	70.4 (10.6)	68.1 (10.2)
13-15	28.3 (4.2)	40.6 (6.1)	42.9 (6.4)	41.1 (6.2)	39.3 (5.9)
16-19	39.0 (5.7)	34.6 (5.2)	50.5 (7.6)	49.2 (7.4)	47.8 (7.2)
20+	26.9 (4.0)	21.9 (3.3)	32.7 (4.9)	32.5 (4.9)	32.3 (4.9)
All YOS	678.2	666.1	666.2	666.2	666.2

NOTE: Number of personnel are shown in thousands, percentages in parentheses.

The pay declines posited here cause only moderate variations in the length-of-service distribution of the enlisted force.

### ALTERNATIVE SCENARIOS OF FAMILY CHANGE

Having accounted for changing force structure, we next consider four alternative scenarios of change in future family structure, the focus of our interest. The parameters of these scenarios, and the assumptions defining them, are shown in Tables 14 and 15.

Scenario S-0 (termed "Family Structure Unchanged" in Tables 14 and 15) serves as a benchmark. It assumes that ratios of dependents and children (as measured on the DOD survey) remain unchanged at

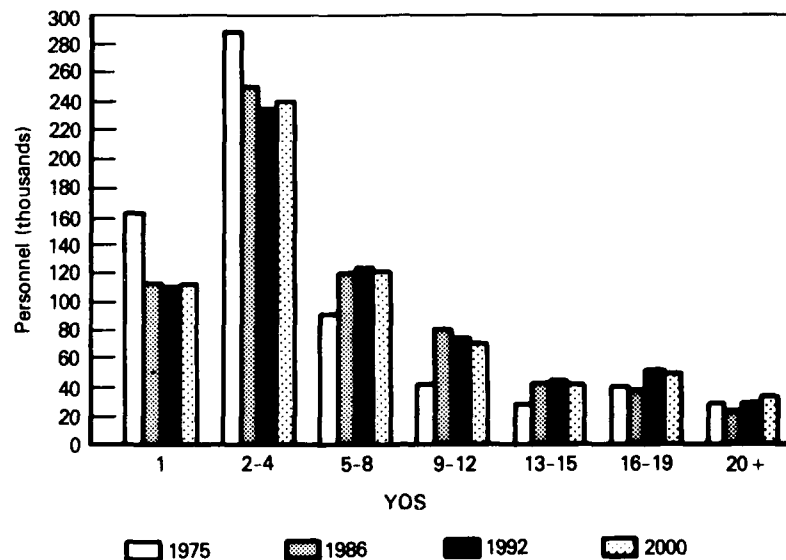


Fig. 19—Summary of enlisted force evolution by YOS group (medium pay scenario)

their term-specific 1985 levels, and *force structure alone changes* in accordance with the medium force structure scenario (our best estimate) discussed above. Accordingly, comparing the year 2000 results for high, medium, and low alternatives in Table 16 indicates how sensitive the future is to structural change alone.

For scenarios S-1, S-2, and S-3, we confine ourselves to the medium force structure alternative. Scenario S-1 (termed "Plausible" in Table 16) is intended to reflect one reasonable view of how the future might materialize. Our assumptions here are that the recent downward trend in term-specific ratios of dependents per soldier and children per soldier will moderate as it continues. Specifically these rates are assumed to change between 1985 and 2000 exactly as much as they did between 1979 and 1985 (refer to Table 14). Because the 1985-2000 period encompasses 15 years (rather than six years between 1979-1985), this is equivalent to assuming that the term-specific ratios will continue declining, but more gradually—that is, at only 6/15th the rate of decline during 1979-1985.

That assumption, however, could be negated by future actions the Army might take. For example, Army actions promoting longer tours

Table 14

PAST AND ASSUMED FUTURE RATIOS OF DEPENDENTS AND CHILDREN  
PER 100 ENLISTED PERSONNEL

Years of Service	Year 2000 Scenario					
	1979	1985	S-0	S-1	S-2	S-3
Dependents per 100 Soldiers						
1-4	88.6	83.9	83.9	79.1	72.1	88.6
5-8	201.5	190.6	190.6	179.6	163.2	201.5
9-12	262.3	260.3	260.3	258.3	255.3	262.3
13-15	302.8	299.7	299.7	296.7	292.1	302.8
16+	324.8	304.0	304.0	283.2	251.9	324.8
All YOS	175.3	170.0	170.0	164.7	156.8	175.3
Children per 100 Soldiers						
1-4	37.5	36.2	36.2	35.0	33.1	37.5
5-8	110.3	98.2	98.2	86.1	68.0	110.3
9-12	163.4	154.6	154.6	145.7	132.5	163.4
13-15	192.4	190.5	190.5	188.7	185.8	192.4
16+	212.8	190.5	190.5	168.2	134.7	212.8
All YOS	96.8	93.4	93.4	90.1	85.1	96.8

of duty would stabilize family life and reduce breaks in the employment of Army female spouses. More continuity of employment, as noted earlier, could induce postponement of childbearing by raising the opportunity costs (Ward and Butz, 1978). Lacking a firm basis for predicting such actions, though, we must confine ourselves to positing informative (but not totally implausible) extremes. Accordingly, the second and third scenarios (S-2 and S-3) intentionally reflect sharply contrasting (but not implausible) alternative futures that might evolve.

The S-2 ("Convergence") scenario in Table 15 envisions a partial closing of the gap between family behavior in Army and civilian settings. Army families shift toward the currently prevailing civilian pattern of later family formation and childbearing. This scenario could materialize, for example, under circumstances where Army spouses have greater success in finding employment, tours of duty are extended, or other circumstances promote convergence toward the civilian pattern. Such convergence implies a shift in the timing of marriage and childbearing from early years of service to later years of adulthood,

Table 15  
ASSUMPTIONS FOR ALTERNATIVE FAMILY STRUCTURE PROJECTIONS

Factor	Projection <sup>a</sup>			
	Family structure unchanged (S-0)	Plausible (S-1)	Convergence (S-2)	Divergence (S-3)
Force structure	Three pay alternatives: • High • Medium • Low	Medium pay alternative	Medium pay alternative	Medium pay alternative
Dependents per soldier (term-specific)	Unchanged from 1985	Moderating decline: 1979-1985 rate of decline repeats once over 1985- 2000	Continuing decline: 1979-1985 rate of decline repeats 2-1/2 times over 1985-2000	Reversal: 1979-1985 change reverses once over 1985-2000

<sup>a</sup>See Table 14.

when some enlisted personnel would have completed their Army careers or have fewer remaining years of service. The overlap between the "family-intensive" years of their lives and the years spent in the Army would be reduced.

The S-3 ("Divergence") scenario envisions an opposite, more far-fetched development (although not for opposite underlying reasons). The scenario posits two effects: (1) an intensification of self-selection at entry and reenlistment, and (2) a behavioral change induced by worsening unemployment among female spouses. Specifically, it assumes an increasing tendency for the Army to attract and retain individuals who tend to marry and have children early or who have dependent children from a former marriage. It further assumes worsening employment opportunities for the female spouses of these family-oriented soldiers, which would lower the opportunity costs of childbearing and weaken the impetus to delay parenthood while in the Army. We have calibrated scenario S-3 so that the ratio of dependents per soldier reverts back to 1979 values in order to show how *much* of a divergence would result from an extreme reversal of the recent trend.

All four scenarios were transformed into estimated future term-specific ratios of dependents and of children per hundred enlisted

Table 16

DIFFERENCES IN POTENTIAL NUMBERS OF FAMILY MEMBERS  
AND CHILDREN IN YEAR 2000, COMPARISON OF  
SCENARIOS FOR ENLISTED PERSONNEL  
(Percent)

Alternative	Family Members	Children
	n = 936,000	n = 544,700
Scenario <sup>a</sup>		
S-0: Family structure unchanged		
High pay	+4.6	+6.1
Medium pay	+3.4	+4.5
Low pay	+2.2	+3.1
S-1: Plausible	-1.3	-3.3
S-2: Convergence	-8.5	-15.0
S-3: Divergence	+8.2	+12.5

SOURCE: Department of Defense (1986).

<sup>a</sup>See Table 15 for assumptions.

personnel (shown in Table 14). (The ratios of S-0 match the actual 1985 ratios by definition; likewise, the ratios of S-3 match the actual 1979 ratios.) The results shown in Table 16 were calculated by multiplying the projected future number of enlisted personnel (from Table 13) by the corresponding term-specific ratio for dependents or for children (from Table 14) to obtain the projected number of dependents.<sup>4</sup> The resulting number of dependents or children was then summed to yield a total for all enlisted personnel, and the total was then indexed as a percentage difference from the corresponding total in 1985. It is these index values (shown in Table 16) that reveal the different consequences of the scenarios' alternative assumptions. The index values show how the total number of dependents and children would *change* between 1985 and 2000 under each scenario.

## RESULTS

Considering first the S-0 ("Family Structure Unchanged") scenario, we see that pay-induced force structure changes alone imply only slightly increasing numbers of dependents and of children by 2000. Even under the high-pay force structure, their numbers would be only 5 and 6 percent above 1985, respectively. Force structure alone, then, will not strongly affect the future number of Army dependents.

Next we consider our S-1 ("Plausible") scenario. Comparing this scenario with S-0 (Medium Pay) indicates that the changes in dependency ratios posited in S-1 imply a net reduction of 4.7 percent (from +3.4 percent to -1.3 percent) in the number of dependents. For children, the corresponding net reduction would be 7.8 percent. Under these plausible assumptions, changing ratios of dependents and children would have a greater effect than changing force structure on the future number of Army dependents. Together, however, the predicted change in force structure and the "plausible" change in family structure tend to offset each other: Their joint effect, we estimate, is only a 1 percent decline in dependents and a 3 percent decline in children, relative to 1985.

We now turn from this benchmark of what we judge to be plausible to illustrations of what *could* happen. Our S-2 ("Convergence") scenario implies a moderate decline in both dependents and children.

<sup>4</sup>As an illustration, multiplying the ratio of dependents for YOS = 1-4 under Scenario S-0 (83.9 dependents per 100 soldiers) by the corresponding number of personnel under the medium-pay force structure scenario (112.6 + 238.8) yields a projected 294,825 dependents of first-term enlisted personnel in the year 2000, assuming "Family Structure Unchanged, Medium Pay."

In effect, if the ratios of dependents per soldier and children per soldier continue changing at the rate they have been since 1979, there would be 8.5 percent fewer Army dependents and 15 percent fewer Army children in 2000 than in 1985.

The S-3 ("Divergence") scenario, by contrast, implies moderate increases in dependents. In effect, were the decline in ratios to reverse, reverting back over 15 years to their 1979 levels, the number of Army dependents would increase 8.2 percent, and Army children would increase 12.5 percent over 1985 levels.

## CONCLUSIONS

This exploration of alternative future scenarios suggests that the number of Army family dependents will decline slightly by the year 2000 and that potential changes in force structure, as envisioned here, would not markedly alter that future. Extreme changes in family structure and behavior could accelerate the expected future decline, or even completely reverse it. The parameters of the S-2 and S-3 scenarios indicate how extreme that hypothetical convergence or divergence would have to be.

The changes we envision within the "Convergence" and "Divergence" scenarios might arise in several ways. Certain Army actions, such as changes in tours of duty or family services, might restructure incentives and disincentives for marriage and childbearing during Army service, widen or narrow future employment opportunities available to young spouses seeking jobs, or alter the reenlistment behavior of single parents. Further research is needed to identify how existing Army actions and policies may now be influencing family-formation behavior and related choices, and to anticipate the potential effects of future actions and policies.



## **IV. IMPLICATIONS**

The three purposes of this study were (1) to document and quantify trends in Army families, (2) to anticipate directions of potential future change, and (3) to identify the important issues those changes pose and explore their implications for force management and service delivery policies. This section addresses the last purpose.

### **EMPLOYMENT OPPORTUNITIES FOR SPOUSES**

Army spouses, like civilian wives, have joined the work force in growing numbers; further increases are probable.<sup>1</sup> That influx has increased both the fraction of married couples who have both spouses as wage earners and the flow of dollars into family budgets. This stronger orientation toward paid employment among younger generations of spouses foreshadows growing demand for daycare, need for assistance in finding jobs, and less participation in traditional volunteer activities. It also highlights the importance of institutional practices within the Army—for example, the frequency and location of moves—that may constrain or disrupt the employment of spouses.

The Army and the federal government are important sources of this employment: Together, they provide nearly one-third of all jobs held by Army female spouses. Army spouses who seek jobs more and more often are encountering unemployment. In an era when wives' earnings represent a substantial fraction of family income, employment opportunities for Army spouses are critical to satisfactory economic adjustment in Army life. Future labor market difficulties that Army wives encounter may have a deleterious economic effect on their families and, in turn, on the Army's continuing ability to retain experienced and skilled personnel.

### **DUAL-ARMY AND SINGLE-PARENT FAMILIES**

The presence of women stood at 10 percent of the active duty force in 1985. With over half of the Army's positions currently open to

<sup>1</sup>The labor force participation of wives is virtually certain to advance in the future; the only question is how much further and how swiftly. By 1995, the U.S. Bureau of Labor Statistics' projections foresee over 80 percent of women 25-44 in the civilian labor force, compared with about 70 percent of women in that age group in 1984 (Fullerton, 1985, Table 4).

women, this fraction surely will rise in the future. As female military members have become more numerous, the Army has gained proportionally more dual-Army families. Likewise, the proportion of single-parent families headed by female members with custody of children has risen sharply since 1979. (The number of custodial single-parent Army families has remained fairly constant.)

Dual-Army and single-parent families pose special problems for the Army. One of every 11 accompanying Army children (more than 42,000) are currently in families where the only parent or both parents may be called away for a prolonged period in case of a conflict. With more dual-Army families, assigning both spouses to the same duty station will become more difficult. The roles of military member and of parent will often conflict as the two-worker Army families and female personnel with children but no spouse become more common. This conflict can be exacerbated or moderated insofar as institutional practices within the Army increase or reduce unpredictable changes in work schedules, the frequency and length of unscheduled alerts and planned deployments, the frequency and locations of moves, and the length and unpredictability of working hours.

Economic incentives—stable employment, health care, schooling for children—may selectively encourage the reenlistment of female members heading single-parent families. Accordingly, the Army should closely monitor the duration of custodial single-parenthood and the reenlistment behavior of single parents, for whom special types of family services may be needed.

## **OVERLAP OF FAMILY FORMATION WITH ARMY SERVICE**

Army families reflect the broad secular transformations of American families generally, but they get established earlier. As a result, the timing of certain family events and stages of family life tend to overlap with the first few terms of service. Much family formation and growth, then, involves young adults *while* they are in the Army, often during their first term.

However, fewer than half of all recruits enlist for a second term. The extent of family-related self-selection here is unknown. That is, we do not know whether the "early" pattern of Army family formation and growth is an artifact of the Army attracting and retaining family-oriented individuals, or the consequence of Army practices and policies that *induce* soldiers to form and build families earlier within the Army setting.

## **STATIONING ABROAD**

More and more family members are accompanying Army personnel to foreign stations. Dependents living abroad pose several problems: (1) dealing with their safety in times of crisis; (2) enabling spouses to find employment, given that second incomes are becoming indispensable to most families' budgets; (3) allocating sufficient resources to maintain quality-of-life services at current levels (since service use is 30 to 65 percent higher abroad than at home); and (4) enabling families to care for children while abroad.

## **RETENTION AND READINESS**

As the roles of military member and family member compete, the Army will be drawn further into the family concerns that Army personnel will face. Ameliorating those concerns could avert developments that might otherwise negatively affect retention and readiness. There are several possible adjustments the Army could make to force management and service delivery policies.

### **Force Management Policy Issues**

To minimize its interference with spouses' workplace and family involvement, the Army should consider changes in its rotation and deployment practices and enhanced training to heighten its officers' and NCOs' sensitivity to family issues.

**Changes in Rotation, Deployment, and Assignment Practices.** Frequent Army relocation, frequent separations, and long and unpredictable working hours directly interfere with spouse employment opportunities and frustrate work careers. (Anecdotal evidence from interviews with Army personnel suggests growing dissatisfaction with the long and unpredictable working hours, particularly in Germany.)<sup>2</sup> More relocations and longer separations discourage retention, and offering a choice of duty station encourages reenlistment. Under its current practices, however, the Army does not assign many personnel to their locations of first preference.<sup>3</sup>

A systematic review and assessment of the Army's current practices of rotation, deployment, duty station assignments, and working hours should be considered with an eye to developing innovative ways to (1) reduce frequency of relocation, (2) reduce length and frequency of

<sup>2</sup>Also see Furukawa and Teitelbaum, 1987.

<sup>3</sup>Vernez and Zellman, 1987.

separations, (3) increase assignment to station of preference, and (4) increase the predictability of working hours. Lower rotational frequency would not only reduce the economic costs of frustrated work careers among spouses, but also potentially increase training effectiveness and unit cohesion.

**Enhanced Officer and NCO Training.** Communicating Army concerns about families, justifying Army practices that affect families, and giving families some voice in deciding their future may influence manpower at least as effectively as providing costly services to families.<sup>4</sup> When job schedules and demands are perceived to be arbitrarily onerous or "unnecessary," that perception fosters negative views of the Army. Addressing those perceptions should be made part of officer and NCO training.

Because military members identify more directly with their units—squadron, company, and battalion—than with the "installation" or the Army at large, the burden of communication and sensitivity to these issues falls to a greater degree on officers and NCOs at that level.<sup>5</sup>

To heighten officers' and NCOs' sensitivity and knowledge about family matters, training should cover:

- Recent changes in family structure and behavior, including (1) spouse's attitudes and work orientation, (2) intrafamily relationships and division of labor, and (3) how Army demands affect family relations and may conflict with family or spouse's aspirations and expectations.
- Tools to assist Unit Commanders and NCOs, including specific guidelines to assure that military *and* family members are effectively sponsored on arrival, feel welcome and appreciated by the command, are well informed, and have structured time under their own control.
- Unit Commanders' and NCOs' roles and Army expectations regarding sponsorship, outreach, family support groups, communications, and information dissemination to military and family members.

### **Service Policy Issues**

The changes in family structure identified earlier suggest the need for continuous monitoring of resource allocation priorities for programs to alleviate the stresses imposed by the "turbulence and uncertainties" of military life. The Army needs to ensure that these programs

<sup>4</sup>Ibid.

<sup>5</sup>For instance, see Furukawa and Teitelbaum, 1987, and Van Vranken et al., 1984.

continue to serve their intended purposes, particularly the Sponsorship, Outreach, Child Development Services (CDS), Youth Activities, and Army Community Services (ACS) programs.

**Changes in Resource Allocation Priorities.** The growth of two-worker families and the compositional and locational shifts in Army families will intensify needs for some services, diminish needs for others, and change the locational distribution of services used.

Services that are likely to experience increased demand include:

- Child development services
- Youth activities
- Spouse employment search assistance.

For child development services particularly, several operational policy questions are likely to be raised with increased intensity: Who should be given priority for the limited number of slots; should service delivery continue to be provided directly (as now) or should it be contracted out; should the fee schedule be uniform or scaled depending on ability to pay or some other criterion?

Demand for other services, most particularly some Morale, Welfare, and Recreation (MWR) programs, is likely to decrease. Such may be the case for Arts and Crafts, Music and Theater, Bowling, and even Clubs. Reflecting historical patterns, these programs have been receiving a higher share of appropriated funds than CDS and Youth Activities (some changes in this pattern have taken place since 1983). The Army should consider reversing this pattern and should closely monitor utilization of these and other programs in the years ahead to make adjustments in the level of service as needed.

The allocation of MWR and family support funds between locations at home and abroad should be assessed to determine whether it reflects the current distribution of needs. As noted earlier, the number of family members accompanying military members abroad has increased, and use of services abroad exceeds use of services at home by 30 to 65 percent.

Finally, the high reliance of some Army services—e.g., ACS and Family Support Groups—on volunteers should be reassessed. Even if the *amount* of services volunteered remained unaffected by the increase in spouses' labor force participation, the flexibility of volunteers will probably diminish.

**Increased Effectiveness of Services.** Gains in service effectiveness should be pursued across the board, with special emphasis given to preventive service programs with high potential payoffs.

First, major gains should be possible in the effectiveness of the sponsorship program. Currently, it effectively serves about one out of three military members on permanent change of station (PCS). And those who may need it most, junior enlisted personnel on their first PCS, are the least effectively served.

Second, serious consideration should be given to expanding outreach programs, particularly those directed to first-termers and to soldiers located abroad. Elements of this program should include meeting all newly arrived family members and assisting in the relocation and adjustments to the new duty station. Thereafter, contacts would be made at regular intervals (e.g., every 3 to 6 months) to discuss their problems and concerns and to evaluate whether the circumstances could be altered through self-support or support from civilian or Army services. The role of this outreach ought to be advisory.

Third, use and effectiveness of ACS support services could be increased by making a clear distinction between (a) its "positive" functions of aiding in relocation of families and facilitating their adjustments to a new environment, and (b) its "negative" functions of providing "rehabilitative" services for families with financial, violence, or other problems. Currently, these conflicting roles affect the setting of priorities between them, fuel the ambivalence with which soldiers and family members perceive ACS, and affect the way services are delivered.

## Appendix A

### CHANGES IN THE COMPOSITION OF THE FORCE

The Army has undergone a fundamental change since 1973 with the shift from a draft to an all-volunteer force. That shift has altered the composition of both those who enlist and those who choose to remain in the Army, and the modification continues as cohorts of new enlistees affect what the future force composition will be for many years thereafter.

Since 1973, the age/experience mix of the enlisted force<sup>1</sup> has shifted toward an older, more senior one as those who entered as volunteers reenlist at much higher rates than draft-motivated individuals. All entry cohorts after 1972 have retained personnel at much higher rates than have previous cohorts, thereby gradually enlarging the size of the Army career force. Because the total Army enlisted force has declined only slightly in size, growth in the career force has resulted in lower accession levels and fewer first-term personnel.

This growth in the career force and decline in junior members is shown in Figs. A.1 to A.4. Figure A.1 shows that those in the first three years of service—the group most likely to be single—has declined from 424,000 in 1973 to 304,000 in 1983, and has stabilized thereafter. Figure A.2 shows the increase in the 4-to-10 YOS group from 132,000 in 1973 to 248,000 in 1982, followed by a decline to 223,000 in 1986. Figure A.3 shows the ongoing All Volunteer Force (AVF) transitional changes in the 11-20 YOS group. Starting from around 100,000 in 1980, this group had risen to 131,000 by 1986. Further increases in this group are projected through 1992. Finally, the 20-40 YOS group (Fig. A.4) shows a gradual oscillation and decline since 1982.

The shift to an all volunteer force changed the characteristics of accessions. The AVF attracted proportionally more individuals with some college education and also nongraduates of high school, and proportionally more blacks, Hispanics, and women. The differing retention behavior of certain groups also is affecting the force. Many individuals leave before completing their normal first-term commitment of three or four years, but first-term continuation rates have been higher

<sup>1</sup>The officer force has always been a volunteer force, and its composition has been only marginally affected by the shift to an all volunteer force. Thus, we will focus in this section on the enlisted force in the Army.

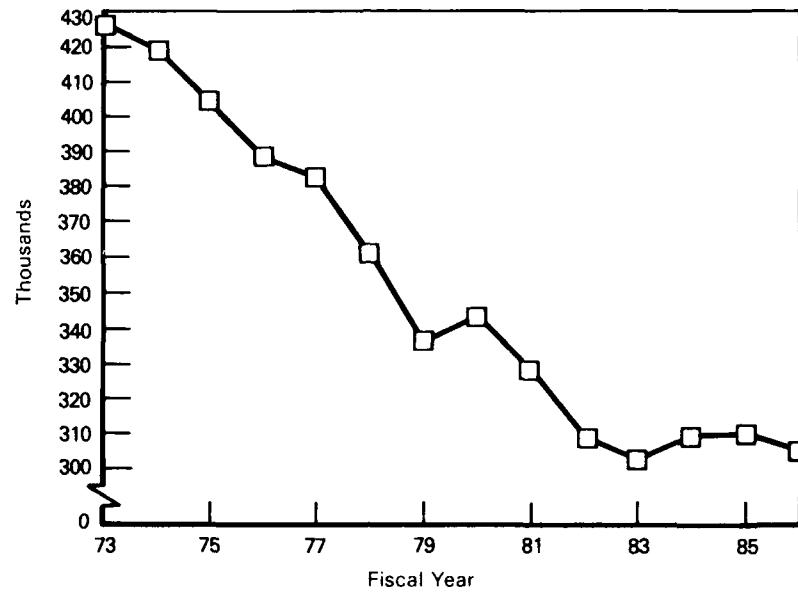


Fig. A.1—Trend in junior enlisted Army personnel (YOS 1-3)

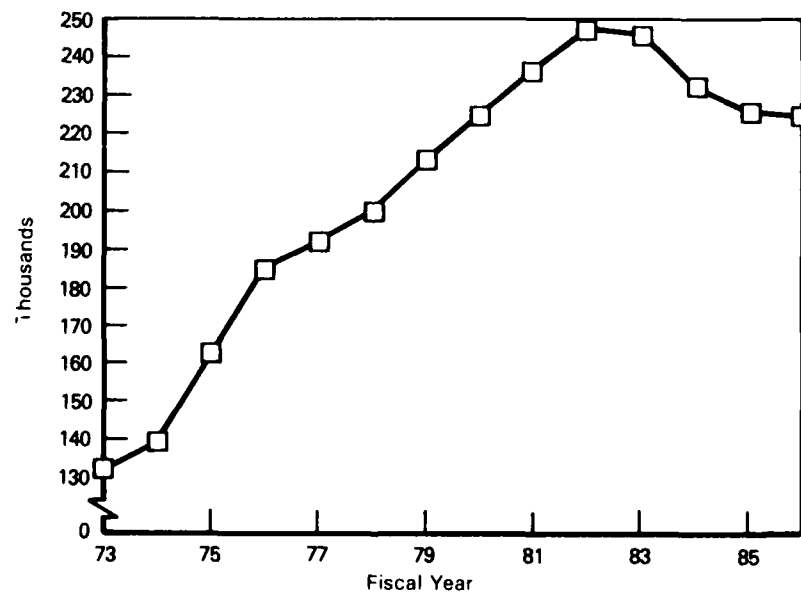


Fig. A.2—Trend in second- and third-term enlisted Army personnel (YOS 4-10)



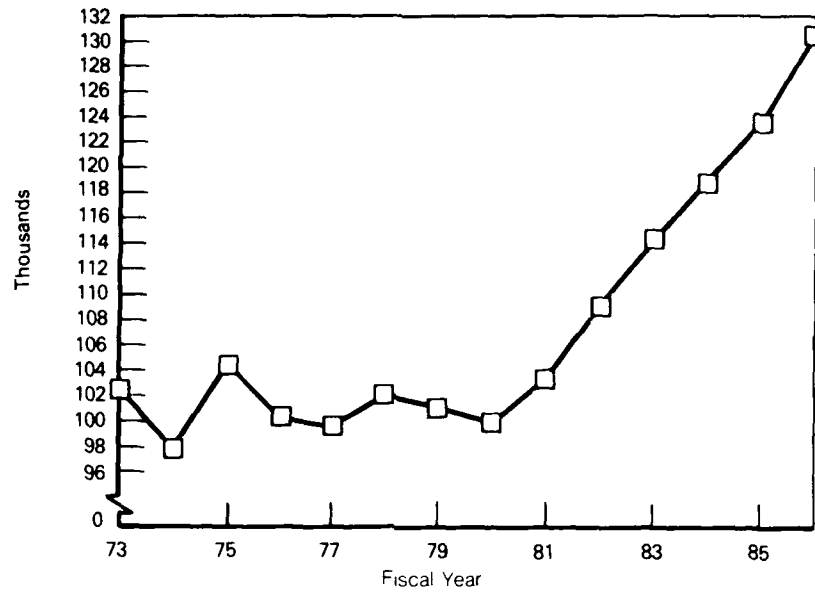


Fig. A.3—Trend in senior enlisted Army personnel  
(YOS 11-19)

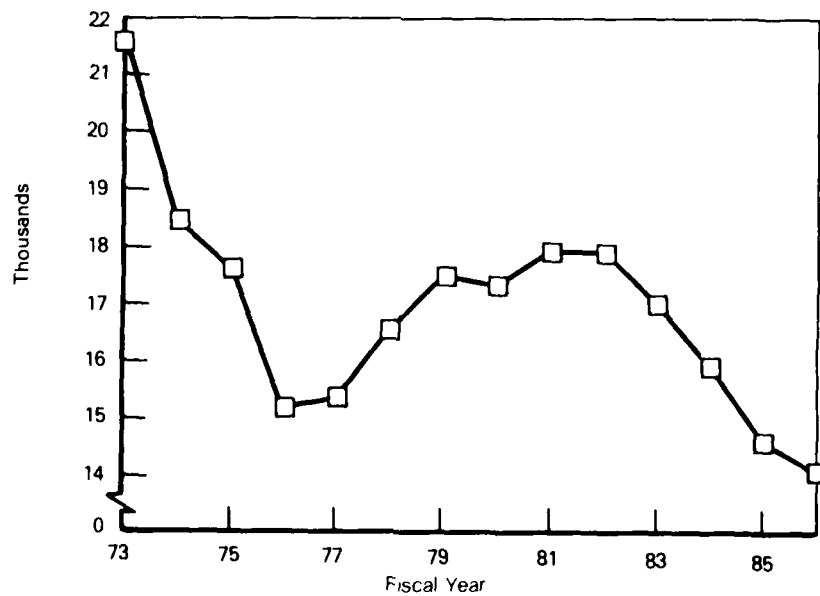


Fig. A.4—Trend in senior enlisted Army career force  
(YOS 20-40)

for individuals who are more highly educated or who rank higher in mental aptitude during the first term (see Fig. A.5). Thus, the educational attainment and mental aptitude distribution of a cohort improve through self-selection in the early years of service. Women with similar education and aptitude to men have higher attrition (see Fig. A.6).

The decisions made at the point of first and second reenlistment also have affected force-wide composition. Generally, minorities and women—other things equal—exhibit higher retention rates than their counterparts, so the minority and gender composition changes as the cohorts progress through the force. Figure A.7 shows the magnitude of these differences in retention.

The number of women in the force rose from 16,000 in 1973 to 68,000 in 1985, as shown in Fig. A.8. Similarly, the number of blacks rose from 126,000 in 1973 to 224,000 in 1981, then declined slightly to 200,000 by 1985 (Fig. A.9).

Concurrent with these AVF transitional changes, developments in the civilian economy and in Army policies have influenced accession and retention behavior over time, further reshaping the composition of the accession and reenlisting cohorts. The most important such influences at accession are (1) the level of civilian unemployment, (2) the level of military pay relative to civilian pay, and (3) the number and motivation of Army recruiters. All three, especially the last of these,

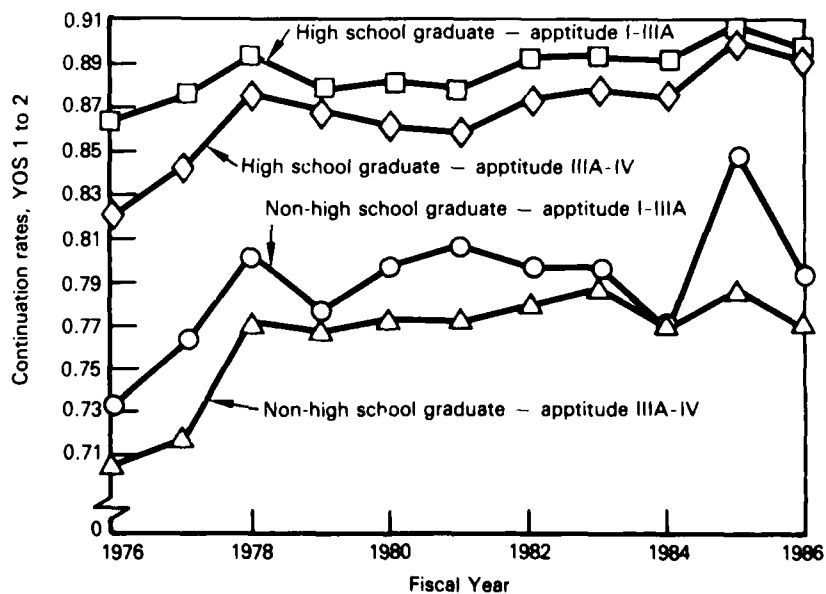


Fig. A.5—Early retention patterns of males with different education and mental aptitude

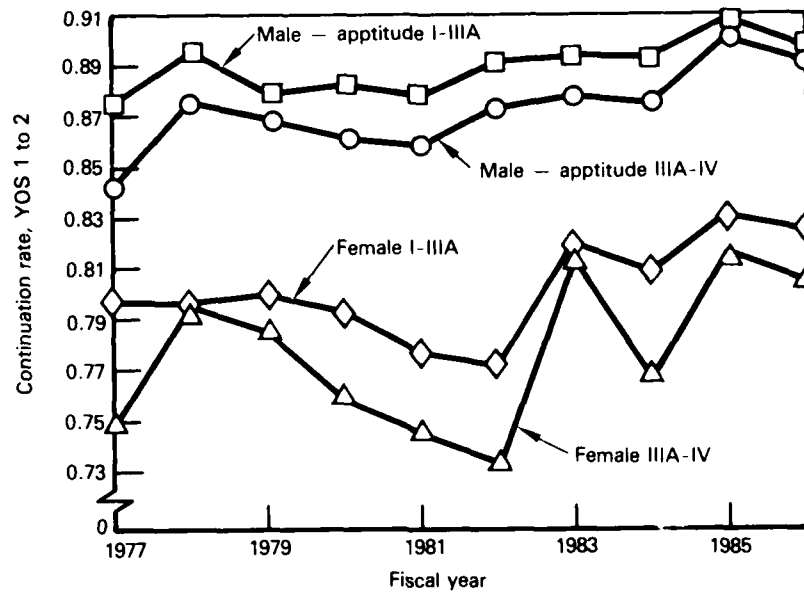


Fig. A.6—Early retention patterns of high school graduates of different gender and mental aptitude

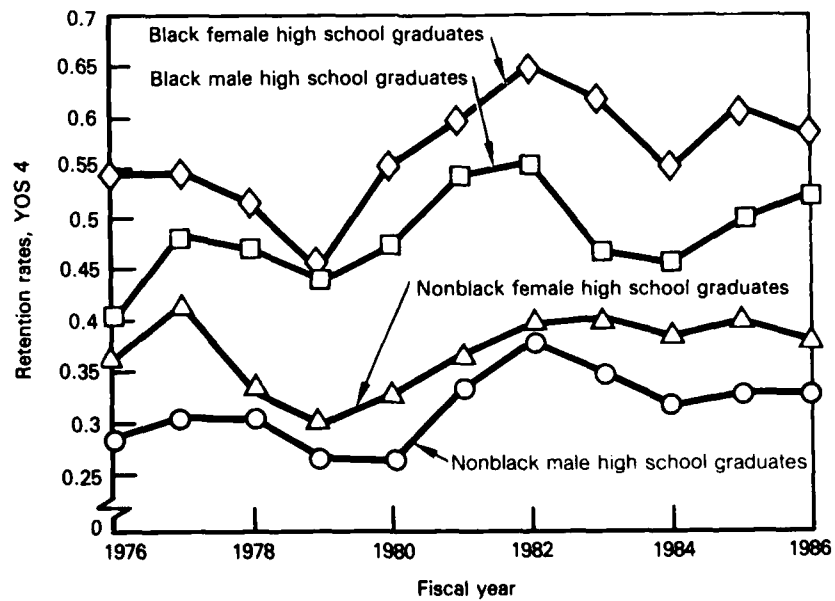


Fig. A.7—First-term retention patterns for personnel of different race and gender

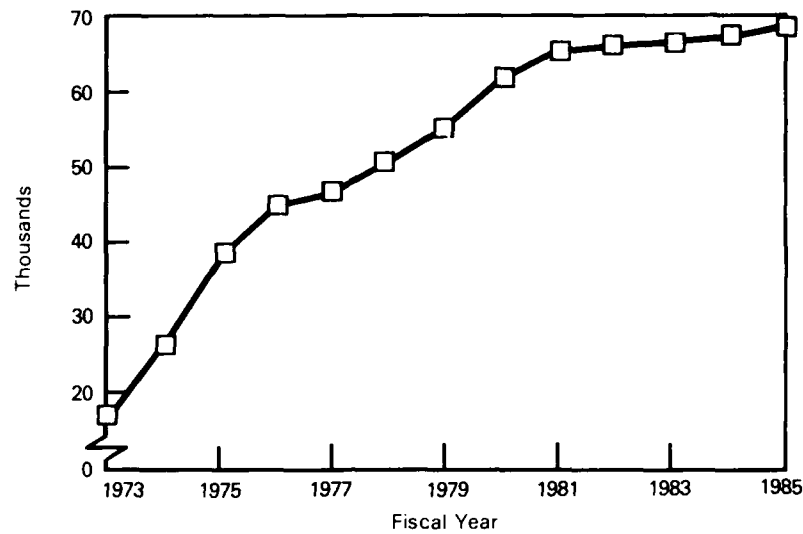


Fig. A.8—The trend in the population of enlisted women

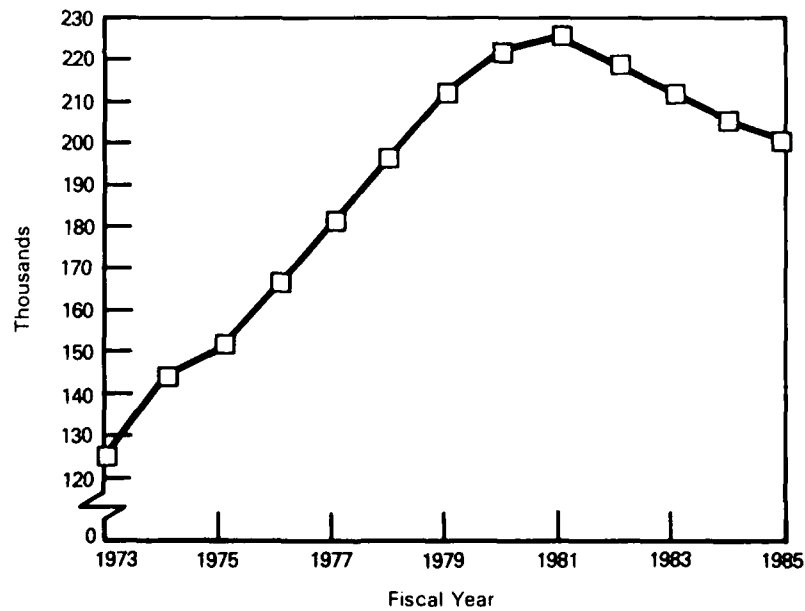


Fig. A.9—The trend in the population of enlisted blacks

are thought to have influenced the quality of Army enlistment cohorts dramatically during the period between 1981 and 1986.

Changing job opportunities for women, both within the Army and in the civilian labor force, also have affected accession composition and attrition patterns. During the initial part of this period, the Army expanded the skills open to women, drawing many women into non-traditional skills. While this opened opportunities for women and resulted in higher enlistments, attrition patterns showed higher attrition for women in nontraditional skills.

These changing civilian economic patterns and military pay levels tend to be cyclical and result in changing compositional patterns in Army enlisted personnel. During economically stagnant times (when recruiting and retention are easier), the Army can select better quality personnel at both accession and retention. This selection usually results in higher educational attainment and aptitude during good times, and somewhat lower educational attainment and aptitude during harder times.

## Appendix B

### ACCOMPANIMENT RATES FOR DEPENDENT CHILDREN BY FAMILY SIZE AND STATION LOCATION, 1985

Table B.1

CHANGES IN COMPARATIVE SIZE OF ARMY FAMILIES, BY AGE: 1979-1985<sup>a</sup>  
(Percent)

Age	Male Members with Own Children Under 18					Female Members with Own Children Under 18				
	None	1	2	3+	Total	None	1	2	3+	Total
Under 24										
1979	41	39	16	4		70	25	5	0	
1985	46	35	15	4		59	31	7	3	
25-29										
1979	23	34	29	14		61	22	9	8	
1985	24	29	33	14		46	32	17	6	
30-34										
1979	13	23	36	28		63	32	3	3	
1985	15	22	37	25		36	30	23	11	
35-39										
1979	10	18	35	37		34	34	25	7	
1985	12	16	41	31		40	19	26	15	
40+										
1979	13	15	30	42		73	—	—	27	
1985	14	19	35	31		42	22	17	19	
All ages										
1979	23	29	28	20		66	24	7	3	
1985	24	26	31	19		50	30	14	6	
Total families (000)										
1979	92.9	115.3	109.9	79.3	397.5	13.5	5.0	1.4	0.1	20.1
1985	89.1	94.9	115.2	70.5	369.6	14.5	8.8	4.1	1.8	29.2

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Married-couple families only.

Table B.2

ACCOMPANIMENT RATES FOR DEPENDENT CHILDREN BY  
FAMILY SIZE AND STATION LOCATION, 1985  
(Percent)

Number	CONUS	Germany	All Other <sup>a</sup>	All Locations
1 child	88	86	73	87
2 children	75	70	65	73
3+ children	63	59	44	60

SOURCE: 1985 DoD Survey of Officers and Enlisted Personnel.

<sup>a</sup>Includes Korea.

## Appendix C

### SUPPLEMENTAL DETAIL ON FORCE STRUCTURE PROJECTION MODEL

The projection model we use incorporates oscillations and the recent effects of reenlistment standards, including the following specific features (Grissmer, 1985; Hosek, Fernandez, and Grissmer, 1984):

- Disaggregation of the enlisted force into 220 groups based on years of service, education, sex, AFQT category, and race;
- Equations specifying future retention rates for these groups, which are sensitive to the career stage, demographic differences, relative levels of military and civilian pay and unemployment, and Army policies:
  - Early attrition equations incorporating results of accession cohort analysis
  - First, second, and third term retention equations incorporating effects of unemployment, military/*civilian* pay, and Army policies
  - Stable patterns of retention for those close to retirement and retirement-eligible
- Determination of annual level of accessions by end strength constraints and annual retention patterns;
- Determination of accession quality through enlistment supply equations for high-quality groups with effects of pay, unemployment, recruiters, educational benefits, and structural changes in Army recruiting strategy;
- Determination of low-quality accessions, accepted as a "residual" needed to meet enlisted end strength; and
- Prior service accession levels and composition determined by recent historical levels.

The controlling retention and accession equations blend the results of previous research regarding the effects of various independent variables (Dertouzos, 1985; Hosek and Peterson, 1985; Buddin, 1984) with regression fits on 11 years of historical data. As an example, Table C.1 shows the pay and unemployment elasticities used for retention equations for high-quality groups between the third and ninth year of service at end of term of service. The data show the expected downward trend in pay elasticities with years of service because of the increasing importance of the retirement system on retention decisions.



Table C.1

PAY AND UNEMPLOYMENT ELASTICITIES FOR HIGH-QUALITY  
GROUPS AT DIFFERENT YEARS OF SERVICE

	Years of Service						
	3	4	5	6	7	8	9
Pay Elasticities							
Male Grads—Black	1.62	1.27	1.22	0.94	1.13	0.38	0.00
Male Grads—Nonblack	2.70	2.35	1.83	1.95	1.61	2.17	1.40
Unemployment Elasticities							
Male Grads—Black	0.22	0.39	0.10	0.23	0.13	0.18	0.15
Male Grads—Nonblack	0.65	0.17	0.21	0.41	0.27	0.27	0.16

## REFERENCES

- Buddin, R., *Analysis of Early Military Attrition Behavior*, The RAND Corporation, R-3069-MIL, July 1984.
- DMDC (Defense Manpower Data Center), *Description of Spouses of Officers and Enlisted Personnel in the United States Armed Forces: 1985. Supplementary Tabulations from the 1985 DoD Surveys of Officer and Enlisted Personnel and Military Spouses*, 3 Volumes, November 1986a.
- DMDC (Defense Manpower Data Center), *Description of Officers and Enlisted Personnel in the U.S. Armed Forces: 1985. Supplementary Tabulations from the 1985 DoD Survey of Officer and Enlisted Personnel*, 3 Volumes, June 1986b.
- Department of Defense, *Defense '80*, Washington, D.C., September 1980.
- Department of Defense, *Defense '86*, Washington, D.C., September/October 1986.
- Dertouzos, J., *Recruiter Incentives and Enlistment Supply*, The RAND Corporation, R-3065-MIL, May 1985.
- Doering, Zahava D., et al., *Description of Officers and Enlisted Personnel in the U.S. Armed Forces: A Reference for Military Manpower Analysis*, The RAND Corporation, R-2851-MRAL, March 1982.
- Fullerton, Howard N., Jr., "The 1995 Labor Force: BLS's Latest Projections," *Monthly Labor Review*, November 1985.
- Furukawa, Theodore P., and Joel D. Teitelbaum, "Human Dimensions Anatomy of a Light Infantry Unit and Its Families," in Department of Military Psychiatry, *Focus on Soldier/Family Behavior and Unit Stress: Policy Issues and Research Findings on Cohort Light Infantry*, Walter Reed Army Institute of Research, October 1987.
- Goldman, Nancy L., "Trends in Family Patterns of U.S. Military Personnel During the Twentieth Century," in Nancy L. Goldman and David R. Segal (eds.), *The Social Psychology of Military Service*, Sage, Beverly Hills, 1976, pp. 119-133.
- Grissmer, David W., *The Accuracy of Simple Enlisted Force Forecasts*, The RAND Corporation, N-2078-MRAL, 1985.
- Grossman, Allyson Sherman, "The Employment Situation for Military Wives," *Monthly Labor Review*, February 1981, pp. 60-64.
- Hayghe, Howard V., "Military and Civilian Wives: Update on the Labor Force Gap," *Monthly Labor Review*, December 1986, pp. 31-33.

- Hosek, James R., R. L. Fernandez, and D. W. Grissmer, *Active Enlisted Supply: Prospects and Policy Options*, The RAND Corporation, P-6967, March 1984.
- Hosek, James R., and Christine E. Peterson, *Reenlistment Bonuses and Retention Behavior*, The RAND Corporation, R-3199-MIL, 1985.
- Long, Larry, *Military Families: Do They Differ from Their Civilian Counterparts*, Center for Demographic Studies, U.S. Bureau of the Census, Washington, D.C., August 24, 1984.
- U.S. Bureau of the Census, *Marital Status and Living Arrangements: March 1985*, Current Population Reports, Series P-20, No. 410, 1986a.
- U.S. Bureau of the Census, *Household and Family Characteristics: March 1985*, Current Population Reports, Series P-20, No. 411, 1986b.
- Van Vranken, E. W., et al., *The Impact of Deployment Separation on Army Families*, Walter Reed Army Institute of Research, WRAIR XIP-84-6, August 1984.
- Vernez, Georges, and Gail Zellman, *Families and Mission: A Review of the Effects of Family Factors on Army Attrition, Retention, and Readiness*, The RAND Corporation, N-2624-A, 1987.
- Ward, Michael P., and William P. Butz, *Completed Fertility and Its Timing: An Economic Analysis of U.S. Experience Since World War II*, The RAND Corporation, R-2285-NICHD, April 1978.